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features



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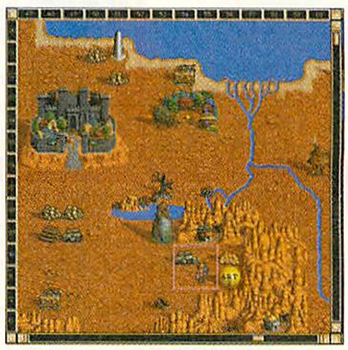
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New killer app?

"It's another Sibelius," somebody said at the official launch of Cerilica *Vantage*, the new feature-packed vector drawing and image enhancement package. Vantage is to be marketed by Cerilica Ltd, a new company born of Astute Graphics. The package does indeed promise to be good enough for some non-RISC OS users to adopt the platform for this one application when it's finished, which should be by the end of February 1999.

From the demos we were shown, that Sibelius description summed it up well. Here was a potentially world-beating software package exclusively for the RISC OS platform. It was like the launch of ArtWorks all over again, except a whole lot better. Collective excitement about *Vantage* was tempered by the fact that we were only looking at an early beta release, but the company clearly knows its stuff and the product was immensely impressive.

The important news is that for those pining for an update to Computer Concepts' *Artworks*, *Vantage* promises to deliver that wish plus a great deal more. *Vantage* is a completely new package and its programmer set out to do everything *Artworks* could do and then substantially improve on it. Undoubtedly, we will be reviewing *Vantage* in depth in the future – beta copies were distributed at the launch – but here are just a few tasters from the feature list:

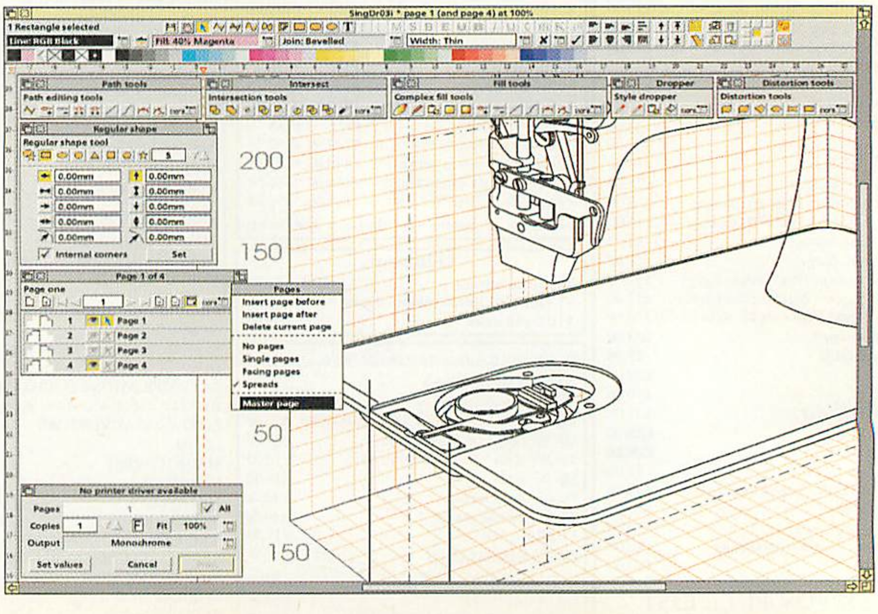
- Very comprehensive colour modelling and support for colour separations, including metallic colour support.
- Accurate print preview – not just a preview of the image, but an accurate model to preview how the document will look when it is printed: an ink simulation. The attention to detail extends to facilities to make it easier to avoid the problem of mis-registration with an over-printing mode when using separations.
- Unique select mode – styles and other attributes can be applied to objects in a powerful and flexible manner.
- Comprehensive support of fonts, including font weights. Text can be entered over multiple lines in DTP fashion.
- All selected regions can have their colour properties displayed and manipulated using drag and drop.
- When a selected object is zoomed up to a size larger than the screen and its box handles disappear, you can assign handle functions to the mouse buttons.
- There is provision for a shared clipboard with other applications.
- Multiple pages are supported, including the provision of a master page and objects can be dragged onto a page selector though Cerilica stress that *Vantage* has no pretensions of being a full-blown DTP package.
- Almost uniquely on any platform, *Vantage* can mix spot colours with others. There is a fully-corrected colour shade gradation selector. There is heavy support for multi-channel images.
- A unique Families function is provided to expand on the conventional layers metaphor – while layers force things to be on top of each other, Families can link layers in a hierarchical manner. Families can be made invisible, non-printable and even non-selectable. Objects belonging to a family can be on multiple pages if necessary.
- There is also support for isometric grids based on different polygons apart form conventional squares and these can have variable angles deliberate skewing. A circular grid option is planned as well.
- There will be slider control for real time sharpening and other image processing functions are to be implemented
- There is talk of collaboration with Beebug to implement a *Vantage* renderer for *Ovation Pro*.

Although it was easy to get punch drunk on all the amazing features we were shown, as of the end of November 1998, *Vantage* did look a tad unfinished. Transparency and anti-aliasing were not yet implemented and a number of other buttons and options during the demo kicked in the increasingly familiar 'Not yet implemented' error box. However, we were assured that most of the missing bits and pieces either existed already as discrete code or were fairly straightforward to create. We were shown unofficial Pantone support, but this probably won't ship as the licence to implement it commercially is too expensive for the RISC OS market.

The target date to freeze the development of the first release and ship Vantage to customers is the end of February 1999. The price will be £200 + p&p + VAT. *Vantage* will only be available direct from Cerilica, apart from distributors based in countries outside the UK. Localised versions for the Netherlands and Germany are planned. *Vantage* is not specifically aimed at schools, but schools and other organisations wishing to negotiate large site licences will probably be able to arrange some sort of deal with Cerilica.

Previous versions of *Vantage* have already been used for real world jobs – we were shown a *Vantage*-designed layout for a British export manufacturing exhibition guide in Jordan for 1999, for example. Undoubtedly, *Vantage* will be a milestone in RISC OS software when it is completed next year. At a time when many doubt the future of the Acorn platform, news of a development like Cerilica *Vantage* is a tremendous.

Cerilica Ltd, tel: 01989 567350, email: cerilica@astutegrfx.demon.co.uk



Phoenix turns to RISC OS

Having all but given up any hopes of reviving Phoebe (see Millipede story), the Phoenix Steering Group, now minus Peter Bondar – see the interview with him in this issue – has returned to the negotiating table with Acorn, this time to investigate the possibility of acquiring the rights to RISC OS. Acorn is not apparently using RISC OS in its digital TV products and is not thought to be interested in NC products, which do currently use RISC OS derivatives, in the long term.

Therefore, like Phoebe and other Acorn desktop computing products, Acorn has no long term interest in product development. The Steering Group sees RISC OS as an essential part of any strategy to maintain Acorn desktop computing and would like to form a company which would acquire the rights to RISC OS and then maintain and develop the operating system on a commercial basis.

With Millipede offering to produce new hardware to run RISC OS, plus desperate need for maintenance and driver support for existing users, the importance of keeping RISC OS up to date is obvious. We gather that preliminary talks with Acorn have been positive, but the sticky issue of how much RISC OS is worth still needs to be resolved. More news, of a good nature hopefully, next month.

Risc PC I developments

Acorn User's sources now indicate that Phoebe is all but dead and buried. Snippets of information filtering through to us suggest that not only is Tulip, the company originally associated with the Phoenix group rescue bid, no longer interested in Acorn technology, but there are, after all, some significant hitches with regard to the hardware which would make production on an economical scale difficult.

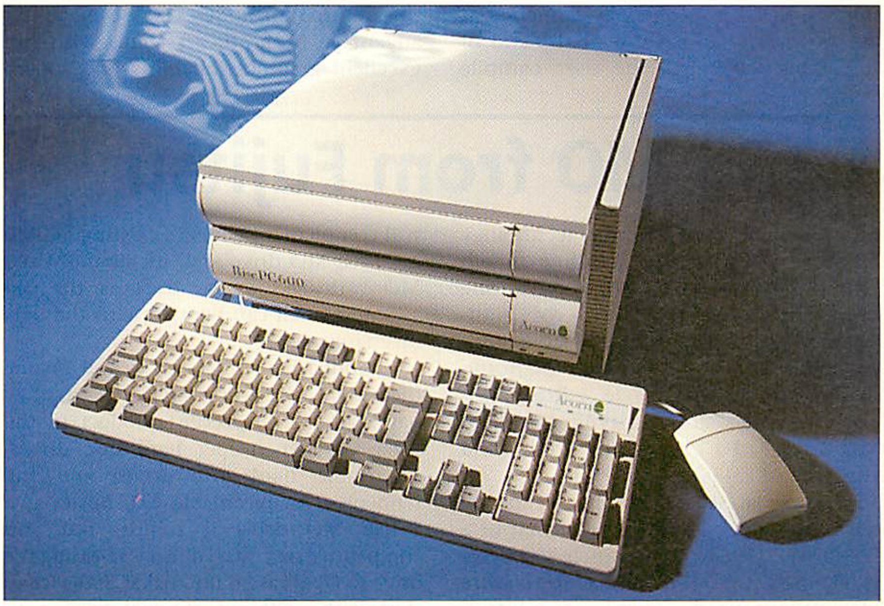
The Phoenix Steering Group is now concentrating on acquiring RISC OS from Acorn (see other story), but another development has come from an unexpected quarter – Millipede Electronic Graphics, the company best known for its Acorn-based professional video effects equipment.

According to Millipede, negotiations have taken place with Acorn with regard to the development of a brand new motherboard to fit the existing Risc PC case. Out would go Acorn's in-house developed VIDC20 and IOMD chips to be replaced by off the shelf alternatives. The latest 100MHz bus and memory parts used in PCs would be adopted for optimum performance.

However, Millipede says that using alternative silicon they can build a RISC OS system which could feature StrongARM onboard plus two spare slots, a display capable of up to 1920x1440 pixels in 16.7 million colours, plus enhanced IDE hard disk support and a built in 100MHz Ethernet interface.

The project would take about six months to complete and Millipede would supply boards for a next-generation Risc PC Mk1. There seems to be little interest in implementing the board in the Phoebe case. Millipede would also like to part-exchange the new boards with owners of existing Risc PCs and re-cycle the old boards as re-furbished machines – Risc PC Classics, perhaps.

However, Millipede was very cautious about the realistic possibility of any deal with Acorn allowing this particular arrangement. In fact as we went to press there was no immediate sign of agreement with Acorn on Millipede's proposal to design and supply the new board at all, but there was very cautious optimism based on their preliminary discussions. Another unknown is whether or not Acorn will enable RISC OS to be modified suitably for the new board. Let's hope we can report success in the future.



Wakefield '99 announced

With Acorn World sidelined for the time being, the non-commercial but highly popular Wakefield Spring Acorn Show is effectively the main Acorn platform show of the year. Next year's event, organised by the Wakefield Acorn Computer (User) Group, will be held at the Thornes Park Athletics Stadium in Wakefield for the third year in succession.

The show, which is becoming unofficially known as the "Acorn World North" show, will take place over the weekend of 15th and 16th May in 1999. As usual, there will be a presentation theatre as well as prize draws. Opening times will from 10am to 5pm on the Saturday and 10am to 4pm Sunday. Advance ticket holders will be able to get in 15 minutes early. Advanced tickets for adults will cost £2.50, under 16s will be charged £1.50. On the day, adult tickets will be priced £3.50 and under 16s £2.50. All children aged 5 and under are allowed free entry.

Cheques or postal orders for advanced tickets should be made out to "WACG Show" and sent directly to the Wakefield Acorn Computer (User) Group at: Show99, 95 Cumbrian Way, Lupset Park, Wakefield, West Yorks, WF2 8JT. Tickets will be available from late January 1999. The official show Web site will be at: http://www.cybervillage.co.uk/acorn/wakefield/show99.html

PowerPoint challenger

If there is one RISC OS application which could potentially trounce PCs and Windows on their home territory it has to be presentation software. The two Windows leaders are Microsoft *PowerPoint* and Lotus *Freelance* and they both suffer from the same basic problem: no anti-aliasing as standard. Font smoothing is now available in Windows as an optional extra, but it is very limited in effect and flexibility compared with what RISC OS can offer.

Projected presentations in board rooms across the world – and in some of the biggest companies – suffer badly from nasty jagged graphics and fonts because of this. Spacetech has seen the opportunity and taken it: OHP is their new package for creating screen-based presentations quickly and easily.

Previewed at the Glasgow show earlier this year, *OHP* was officially launched at the Acorn Midlands show at the end of November. *OHP* lets the user compile presentations made up from a number of graphics object files. Presentations can then be shown the computer's display as a full-screen presentation. You could also attach a professional video projector for maximum effect.

OHP is intended as an electronic Overhead Projector (hence the name), it is not a sophisticated multimedia authoring tool. Spacetech says the priority for it was to be quick and very easy to use. Compared to *PowerPoint*, which is remarkably complex to use, *OHP* and RISC OS drag-and-drop combine to make for quick and easy presentation creation. The read-only version, *OHPShow* (which is Freeware) can be given away with presentations or used on any number of computers.

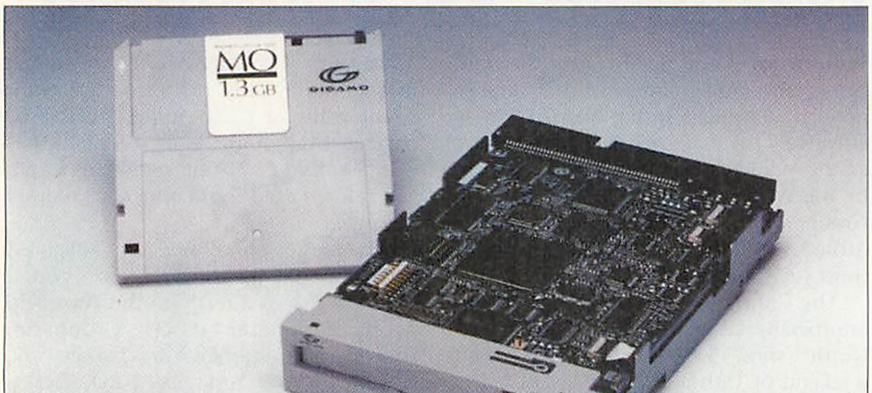
Program author, Tony Still, said: "I wrote this package in response to a need for a good presentation package on the Acorn. In RISC OS we have an advantage over other systems with our excellent graphics capability and superb anti-aliasing of fonts. People who are used to Microsoft's *PowerPoint* on the PC are really impressed with the display quality." Still added: "My main concern, however, was to make the package quick and easy to use. I wanted to make it possible to produce a presentation in five minutes. In fact, if you have pre-prepared graphical work in Draw, Paint, Photodesk or wherever, it is possible to create a presentation in literally seconds!" *OHP* is available on CD-ROM for £29.95 inc.VAT and UK carriage. It requires RISC OS 3.5 or higher. Spacetech, tel: 01305 822753, fax: 01305 860483, Web: http://www.spacetech.co.uk

1.3GB MO from Fujitsu

MO (magneto-optical) drive technology hasn't been hitting the headlines much recently. However, MO drives have long been quite a popular form of high-capacity rewritable removable storage for specialist users on the Acorn platform, like digital video movie editors, for example. Four years ago a typical 3.5 inch MO drive had a capacity of 128Mb and cost around £500.

Fujitsu's latest MO drive has a capacity ten times larger, almost double that of a CD-ROM. The *Gigamo* 3.5 inch MO drive is claimed to be the first to feature Magnetic-induced Super Resolution (MSR) encoding technology. Data transfer rate is up to 5.9Mb/second. The new drive will complement Fujitsu's existing 640Mb 3.5 inch MO drive and, incidentally, old MO cartridges as far back as the old 128Mb format can be used with the new mechanism.

It's not actually that easy to find anyone these days who stocks MO drives as they have become a specialist product in the wake of ever-cheaper hard disc drives, removable hard disc drives and the refinement of recordable CD, however, a 1.3Gb MO drive is robust, fast and competitive on costs. Fujitsu is releasing the drive to OEMs as an internal SCSI device to start with, with an external version to follow. Fujitsu Europe, tel: 0181 573 4444, Web: http://www.fujitsu-europe.com.



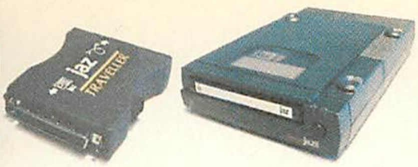
School net to Internet

ArgoNet, the Acorn-friendly Internet service provider, has released a low cost package for connecting a school's Acorn network to the Internet. The ANT Internet Server Suite is designed to provide easy control of individual user access, as well as delivering web, email and news services across an internal school network.

Network managers can use the available software, either to limit the areas of the Internet to which users have access, or alternatively, create a local intranet which would contain approved information and material. The ANT Internet Server Suite incorporates: Web Server, Web Proxy Server, E-mail Server, News Server, FTP and Name Servers.

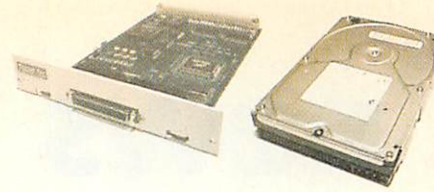
The single server connects to the Internet using either a modem or ISDN terminal adapter, and runs on a server computer running RISC OS 3.1 or later. On the local network side, any computer with suitable industry standard Internet software, Acorns, PCs and Apple Macs, can be catered for. Multiple computers on a network can be online at any time, although the cost of being online will be for the proxy server computer.

A licence for the Internet Server Suite costs £99 for up to four users. Additional users can be added in 'blocks' at £99 for up to five users. The ANT Internet Server Suite also includes a free site licence for the appropriate number of stations. For more information, contact Argo Interactive Group plc, tel: fax: 01243 815815; 01243 815805, email: info@argonet.co.uk, Web: http://www.argonet.co.uk



Power-tec

The complete disc solution



New!

PowerFlash

£49

Great new upgrade for Cumana SCSI II card owners...

Yes exactly what you've been waiting for; the ability to re-engine your Cumana SCSI II card to powerful Ultra SCSI III.

Simply send your Cumana SCSI II card to Alsystems (by arrangement only) and our technicians will replace your old SCSI II chip with a powerful State-of-the-Art Ultra fast SCSI III controller IC. For your peace of mind, your SCSI card will be thoroughly tested on site to ensure data integrity. Indeed, we are so confident in the product that we are giving a 12 month hardware warranty with every PowerFlash SCSI III upgrade, just like new!

This new powerful SCSI III Controller IC is backwards compatible with SCSI II devices, so there's no need to worry. Simply plug your new SCSI III card into your Acorn computer, run the installer software and your SCSI devices, such as hard discs, scanners and CD ROM drives will work as before.

Main Features of PowerFlash:

- Multi-tasking with Risc OS.
- Read-ahead/write-after cacheing.
- User-selectable LFAU size setting.
- User-selectable number of sectors per track.
- Support for DOS formatting and direct addressing of DOS drives.
- ATAPI and SCSI CD ROM drivers included (inc Toshiba, NEC, Pioneer, Hitachi etc).
- Support for multi-changer CD ROM drives.
- Support for PhotoCD.
- Support for AudioCD sampling.
- Supports DVD drives.
- Supports CD-R and CD-RW drives.
- Supports Epson, Mustek, Microtech and Umax Scanners.
- Supports Jaz, Zip, SyQuest, SyJet, Mag-opt, Nomai removable media drives.
- Supports ALL harddrives from ALL manufacturers.
- Support for NetBSD/ARM32.
- Support for Risc OS 3.1, 3.11, 3.12, 3.5, 3.6, 3.61, 3.7 and 3.71.

http://www.alsystems.co.uk/power-tec/powerflash/

Please call or e-mail us for more details...

Alsystems

47 Winchester Road, Four Marks, Alton, Hampshire, GU34 5HG, UK

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IDE Zip

Plug in an IDE Zip!

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Why not fit our new low cost IDE Zip drive into your Risc PC. We supply a full kit including 5¼ inch adapter, cable, screws and driver software.

Our formatting software makes your IDE Zip discs totally interchangeable with parallel port or SCSI Zip discs.

All this for only £99!

Main Features of IDE Zip:

- Multi-tasking with Risc OS.
- Allows locking of eject mechanism.
- Express Install (Easy) & Advanced Configuration Modes.
- Icon bar icons may be customised.
- User-selectable LFAU size setting.
- User-selectable number of sectors per track.
- Support for DOS formatting and direct addressing of DOS drives.
- Supports SCSIBlock commands.
- Supports Synchronous and Asynchronous transfers
- Carries out Power-On-Self-Test (POST) on start-up.
- ATAPI and SCSI CD ROM drivers included (inc Toshiba, NEC, Pioneer, Hitachi etc).
- Support for multi-changer CD ROM drives.
- Support for PhotoCD.
- Support for AudioCD sampling.
- Supports CD-R and CD-RW drives.
- Supports Epson, Mustek, Microtech and Umax Scanners.
- Supports Jaz, Zip, SyQuest, SyJet, Mag-opt, Nomai removable media drives.
- Supports ALL harddrives from ALL manufacturers.
- Support for NetBSD/ARM32.
- Support for Risc OS 3.1, 3.11, 3.12, 3.5, 3.6, 3.61, 3.7 and 3.71.

http://www.alsystems.co.uk/power-tec/poweratapi/

Prices

PowerAtapi	with Internal Iomega IDE/ATAPI Zip Drive:	£99
PowerAtapi	Writable Driver only:	£35
PowerFlash	Ultra SCSI III upgrade for Cumana SCSI II:	£49
PowerIDE	Driver:	£25
PowerJaz	with JazTraveller Interface:	£49
PowerJaz	Driver only:	£25
PowerROM	Upgrade (state make of SCSI card):	£35
Power-tec	Fast SCSI II card:	£135
Power-tec	Ultra SCSI III card:	£175
Ultra SCSI III	Upgrades:	
	v1.0x Standard Upgrade:	£110
	v2.0x Standard Upgrade:	£49
PowerZip	with Iomega Parallel Zip Drive:	£115
PowerZip	Driver only:	£25
PowerZip+	Driver only:	£35

NB: All prices exclude VAT and carriage.

E&OE

CD writers read faster

CD Writers are cool – you can backup your hard disc on write-once 650Mb CDs for under a pound. Who needs Zip discs when you have a CD Writer – practically everyone has a CD-ROM drive these days. Or you can make your own music CD compilations (respecting copyright laws of course). The newer CD Writer drives also support re-writable CDs.

So what's new? CD Writers have been around for several years and re-writable versions are now fully fledged and more affordable than ever. In fact a recent report suggested that CD-R and CD-RW sales are increasing at an annual rate of 200 percent and already out-strip combined sales of removable hard disc drives and high capacity floppy drives, like Zip and LS120 types. However, the big problem, until now, has been speed.

The typical writing speed for these drives is usually 2X or 4X and re-writing can be slower than write once mode. If that's not bad enough, these drives tend to have severely compromised reading speeds, typically 6X on the cheaper models. This compares with typical sub-£50 CD ROM drives which offer 36-40X read speeds. You can't yet get a CD Writer with a 40X read speed, but both Mitsubishi and Sony have just announced drives with respectable read speeds of up to 24X.



Neither are particularly fast at writing – the Sony CRX100E-RP reads at 24X but writes and re-writes at just 2X speed, while the Mitsubishi Verbatim 4X4X16/20, as its name indicates, writes in both modes at 4X and has a read speed of 16-20X. Sony says its drive is particularly good at track to track performance using a track recovery algorithm which allows writing to resume at the point of an interruption should data transmission be interrupted during the recording process.

Depending on internal or external version, or choice of interface (SCSI or IDE), these drives start at around £200 plus VAT. Mitsubishi, tel: 01784 439781, Sony: tel: 01932 816000.

Reduced smear from Eizo

Smear-free viewing is now guaranteed by Eizo, the monitor manufacturer. The company's new 17 inch FlexScan F57 model is claimed to be sharper, more steady and around 20 percent brighter than its predecessor, the F56. A combination of a signal filter and DSP (digital signal processor) is used to improve image quality and stability. The signal filter eliminates ghosting or smearing if the display signal is of poor quality and the DSP improves reliability through a lowered component count and makes the unit more resistant to external interference from devices like mobile phones.

The F57 also has a maximum refresh rate of 89Hz and achieves 85Hz at 1280x1024 resolution. The FS tube has a 0.26mm dot pitch. Options include an attachable speaker and microphone and USB – well, monitors do usually out-last the computers they are connected to and, who knows, someone might provide USB connectivity for RISC OS.

The guide price for the new F57 is £409. Eizo enquiries: tel: 01483 719500, fax: 01483 719560, email: eizo@pds.co.uk, Web: http://www.pds.co.uk



Data Safe

A safe for your data, well, sort of. APDL (Archimedes Public Domain Library) continues its diversification with the introduction of another hardware product. Data Safe, priced £104 inc.VAT, is an external hard disc case with power supply and parallel port interface – but no hard drive.

Quite simply, the case is empty so you can fit a hard disc of your own choice. Brand new hard discs are very inexpensive – from £72+VAT for a 3.2Gb model, for example. Or you might have an old hard drive sitting on a shelf gathering dust. Installed in the APDL Data Safe, you have an instant spare external hard disc drive which can be plugged into any computer (with bi-directional parallel interface – A3010, A5000 and later) which has the Data Safe software installed on it.

For an extra £19, you can opt for the Super version of the Data Safe, which adds the versatility of being able to fit and remove the drive to or from either your Risc PC or A7000 or your Data Safe unit. The advantages here are that you can have as many removable hard disc units as you like, plus when fitted internally to your Risc PC or A7000, the drive will operate more efficiently than via the parallel port interface of the external Data Safe.

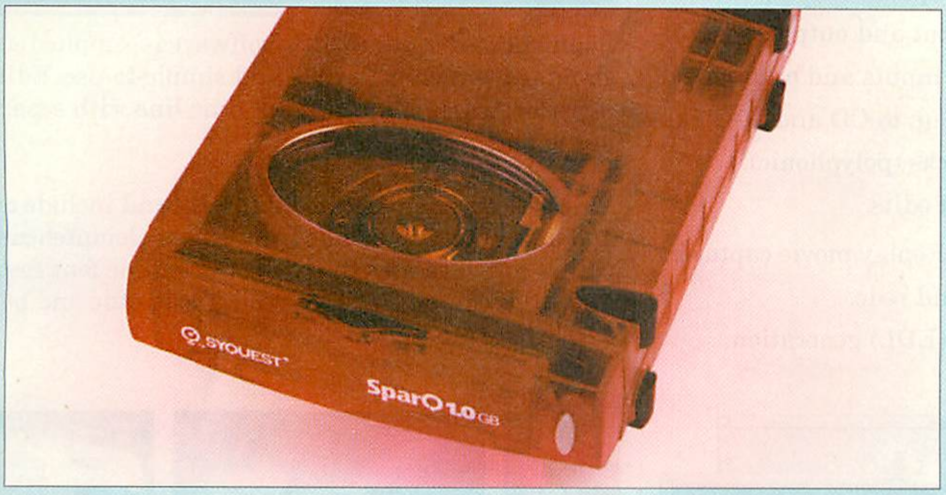
The IDE interface in all Data Safes is enabled using the same filing system as the ICS filing system which APDL took over and now continues to develop. This means that users of the ICS and APDL IDE interface cards can recognise drives with ICS/APDL created partitions and password security for partitions when using the 'Super' removable option.

Even if you don't have an ICS/APDL IDE interface and you are using the standard Data Safe, you can still create and password protect partitions on the drive hosted by the Data Safe unit. PC drivers are also supplied, but at present a PC formatted drive can't be used on an Acorn computer. APDL is working on this. APDL can also supply what is effectively an IDE version of the Data Safe, connecting to their IDE card instead of the slower parallel port interface. For more information, contact APDL, tel: 0181 778 2659, fax: 0181 488 0487, email: info@apdl.co.uk, Web: http://www.apdl.co.uk

SyQuest in trouble

SyQuest followed up the recent announcement of their latest removable hard disc product, a USB version of the 1Gb SparQ family in a rather resplendent translucent pink case, with news that the company was seeking protection from its creditors through the US Chapter 11 legal provision for companies which are in financial difficulties. SyQuest products are popular on the Acorn platform and naturally, we hope that SyQuest will recover and the business can return to normal, however, should that not happen, several third party companies are offering servicing facilities.

If your SyQuest drive does develop a problem, it's likely that your dealer will be able to get it repaired, regardless of the state of SyQuest's financial situation.



New digital sound sampler

Irlam Instruments has taken the audio subsection of its 24i16 multimedia card and created a stand-alone high quality audio digitiser, called simply the *i16*. Compatible with the A5000, A7000 and Risc PC, the *i16* card is ideal for digital home recording direct to disc. A wide range of sample formats is included and rates can reach as high as DAT quality.

Mixer and recording levels can be monitored and adjusted using on-screen controls and VU meters. Replay and .WAV format files can be created and edited using supplied software. The card is scheduled for release at the end of 1998 and will probably be priced £99 + VAT. Irlam Instruments, tel: 01895 811 401, email: sales@irlam.co.uk, Web: http://www.irlam-instruments.co.uk

Victorian computers

Do your computer and peripherals make an untidy mess in the corner of your room? Why not hide it all inside this elegant item of pine furniture from David Ashbee of Woodside Pine (01525 862433).



JaffaSoft on the Web

JaffaSoft, of WimpWorks fame, has asked us to remind everyone that their old Web address, http://www.cryogen.com/jaffa/ should no longer be used. This is an old address and the new current web site is located at: http://www.jaffasoft.co.uk/

Risc User

A slip-up on the keyboard last month made us confuse Beebug magazine with Risc User – we of course meant the latter. Meanwhile, Beebug points out that although they are no longer selling products retail, Beebug Software remains in operation and, in fact, prices have just been reduced to coincide with a new dealer discount structure. Upgrade offers for users of other DTP packages are now no longer offered, but the new full price is similar to the old offer price. Beebug, tel: 01727 840303, email: sales@beebug.co.uk

Portable news

Interconnex UK Ltd, the company designing the much-anticipated 'Peanut' RISC OS portable, has announced that it has taken over Innovative Media Solutions Ltd (IMS), the company which was going to market the machine. The IMS take-over has resulted in a small reduction in overall head count and some logistical changes. Interconnex have moved into the Box Bush Farm complex, previously occupied by IMS.

There may be a further move in a few months time. Interconnex are using IMS' old phone number, but note that IMS' fax number is discontinued, the Interconnex fax being on 01934 522880.

Email addresses which used to be in the format xxx@ims-bristol.co.uk can now mostly be reached by using xxx@interconnex.co.uk instead. The old IMS Web site (www.ims-cdc.demon) will soon be closed down. The Interconnex Web site is now online and operating at: http://www.interconnex.co.uk. IMS PC CD ROM/Reader products are no longer available. Interconnex will continue to sell off any remaining stock. WebMaster is subject to on-going negotiations – it will continue to be sold by Interconnex while negotiations continue.

As for the portable itself, as of the beginning of December, development was practically complete and according to the company there is a chance that the first portables will ship before the end of the year. The PCMCIA slots built in to the off-the-shelf Twinhead laptop case are now enabled and Interconnex will ship a generic Hayes modem driver for PCMCIA modem cards.

However, third parties will be responsible for feature-specific drivers. Network cards should function on the machine, but Interconnex admit they don't have the in-house expertise to write the drivers, so there is an opportunity for a coder there too. The provisional price is £1,500 + VAT and no official name has yet been chosen for the machine – suggestions are welcome.

For more information, contact Interconnex UK Ltd. tel/fax: (01934) 522 880, email: sales@interconnex.co.uk, Web: http://www.interconnex.co.uk/

Contacting me

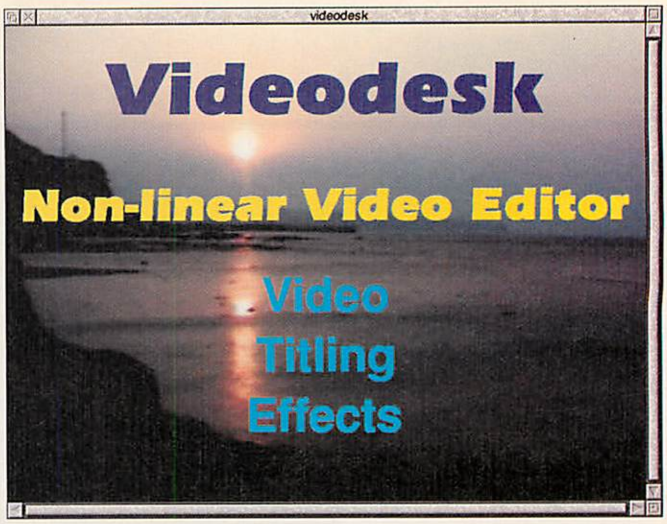
You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: news@acornuser.com

Videodesk

Videodesk is a powerful non-linear video editing system. It allows full-size, full-colour and full-motion video to be edited to frame accuracy, and effects and titles added. The finished material can then be output back to video for recording or display.

Key Features:

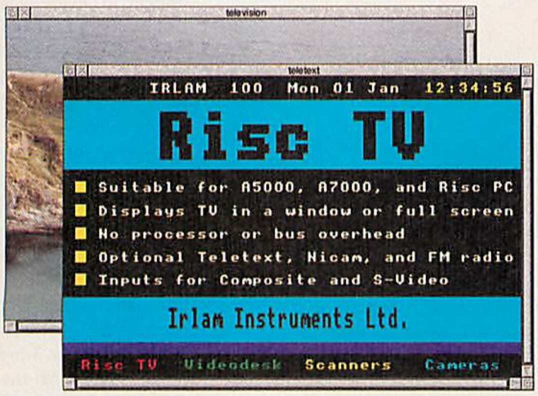
- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- Instant playback of edits.
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.



Sophisticated video editing software is supplied as standard, which is flexible and simple-to-use. Editing is performed on a multi-track time-line with separate audio and video tracks.

Video effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Comprehensive titling software uses the RISC OS outline font system, and titles can be made to scroll, flash, fade and be overlayed onto the video.

Risc TV



Risc TV is a unique multimedia digitiser complete with built-in television tuner and audio processor, which allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

Unlike other digitisers, **Risc TV** uses special hardware to overlay video directly. So, full motion video can be displayed in 24 bit colour, with no processor or bus overhead. Now you can watch television and use your computer!

Scanners & Cameras




We support Epson's range of high quality colour flat-bed and film scanners, suitable for home, school and business applications. All scanners are supplied complete with our renowned **ProImage** driver software.




As the leading independent supplier of digital cameras to the Acorn market, we have support for over thirty different models from the leading manufacturers - Agfa, Epson, Olympus, Sanyo, and Sony.

Contact us for full details of scanners and cameras, and latest pricing information.

i

For the Complete Picture...

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Brunel Science Park, Brunel University, Kingston Lane, Uxbridge, Middlesex, UB8 3PQ.
Tel/Fax: 01895 811401 Email: sales@irlam.co.uk
Visit our website: www.irlam-instruments.co.uk

MasterCard VISA

AdVantage Cerilica

Much hype has surrounded the development of a proposed "replacement to Artworks" currently going by the name of Cerilica *Vantage*. Just as this new company was riding a wave of positive publicity, they made the mistake of changing the name from the long-publicised 'Avante'. Fortunately, Cerilica have made no such mistakes with the actual application, which even at an incomplete stage had members of the Acorn press, developer community and recruited beta testers, enthralled at a recent Cerilica press day.

This first public unveiling of *Vantage* marks the start of a beta test phase of the product which will hopefully be finalised and released by February of 1999. Although many features are yet to be implemented in what is only a beta release, the commitment, experience and skill of the developers is already very evident in this landmark product. At a time when many Acorn users are hoping for a new killer app to make the continuance of the RISC OS legacy essential, *Vantage* fits that bill.

Programmer, Simon Birtwistle, originally began development of the application as the current software simply did not do the job properly and with many years of experience in the design and publishing industry he is the ideal person for the job. Drawing on this valuable hands-on experience, Simon has not only created an up-to-date replacement for Artworks but has taken the functionality of this application way past what you'd ever imagine you could do with CC's dated vector drawing software.

Why am I so convinced of this application's importance on the Acorn scene? The only way to illustrate this is to provide examples of Vantage's in-depth functionality. The feature I just have to mention is the inks support. Where Artworks and most other drawing or DTP software provides a so-called WYSIWYG display on screen, anyone who's printed from these applications will know that the RGB display on your monitor is usually completely different to the colours in the printed output produced at the end of the design process. *Vantage* uses a highly accurate physics model to display on screen the exact ink colours which you'll see when you print out your design.

Inks can be combined to create new colours (exactly as they'll appear after a run through the printing press) and paper colour on screen actually affects the colour of objects drawn onto the page – as it does when you print coloured inks onto coloured paper. This is just one example of *Vantage*'s incredible functionality which can not be found to such an accurate degree in software on any other platform.

Photodesk 3

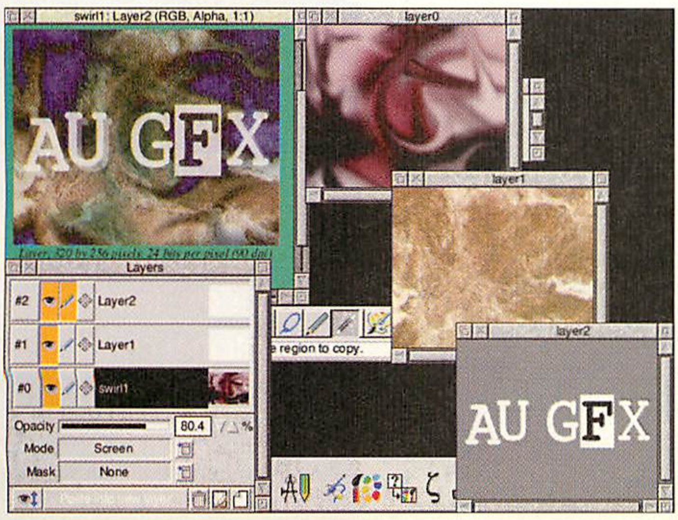
Several months on from the release of Photodesk 3, I've now had chance to regularly use the new features in my everyday graphics work. The core feature of multiple layers in each picture really is the essential update we've all been waiting for, but I have discovered one or two niggles in its implementation. Saving a multi-layered picture in Photoshop format for instance, doesn't retain the layer type (Replace, Add, and so on).

This is rather annoying when you load a picture up and find it looking nothing like it's original state when you saved it. At the same time the overall application still seems a little buggy in terms of the occasional crash (particularly when changing screen modes), and I'd hoped that this would have improved from version 2. Speaking to Spacetech, Chris Hornby thought that this was a possible memory problem due to Photodesk shifting around large amounts of data (given that this only seems to occur on some machines, it's very difficult to track down the bug). The layers problem is also something else that the Spacetech team are looking into.

My additional concerns regard the interface in the new layers window. In appearance you have all the details you need for efficient working. The clipboard style thumbnail image of each layer (which only updates on a fix), along with the other details are excellent. However, in use the interface is not quite as crisp. Several parts of the pane representing each layer can be clicked on and selected with varying results, but only when you select that layer for drawing, do the layer's mixing attributes appear in the bottom part of the window. Perhaps a limitation in the technical workings of the application, but it would have been nice to be able to do things like altering the opacity of any layer while all layers were visible on screen.

However, at the end of the day I'm really just criticising the finer points of this wonderful application. For me, Photodesk frees up the implementation work of creating bitmap graphics. In effect, it lets you get your ideas and creativity onto screen as easily as picking up a pencil and drawing. Photoshop on the PC, running under the horrible Windows GUI, simply can't match this, despite all of it's touted plug-ins and features. The latest news suggests that RISC OS will survive, and for graphics users that means the most intuitive and productive interface for producing artwork in, lives on.

Next month I'll be looking at Spacetech's new CDs, which are further evidence of graphics developers like Spacetech's commitment to the Acorn scene, at this time of uncertainty.



Photodesk 3 in use, with the three image layers on the right, combined together to make the picture on the left. Each layer can be edited independently.

Contacting me

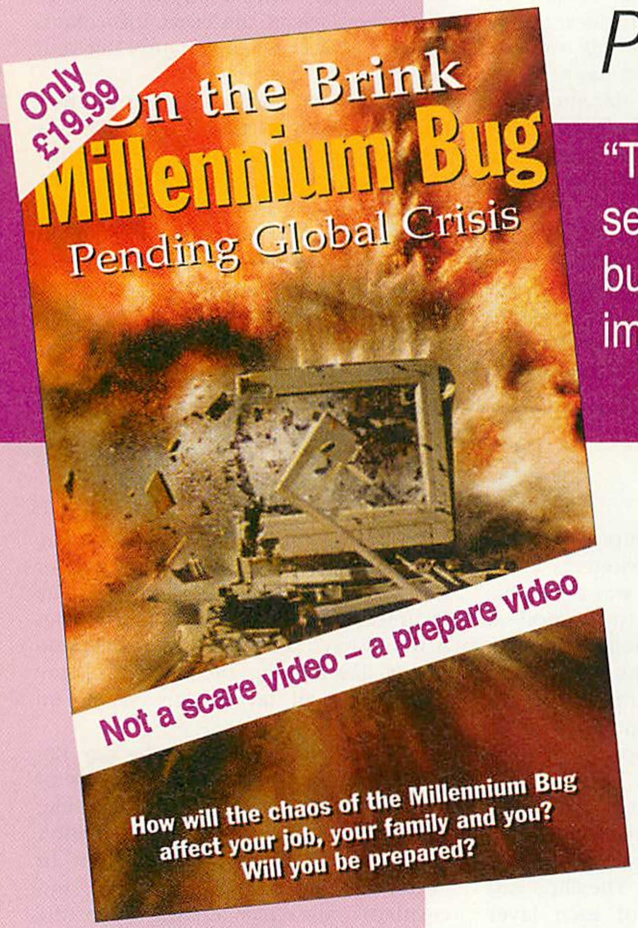
You can contact the Graphics page by writing to me, Paul Wheatley, at Acorn User, Tau Press, Media House, Adlington Park, Macclesfield, SK10 4NP or, preferably, emailing graphics@acornuser.com.

Special Offer

On the brink...

Millennium Bug

Pending Global Crisis



"The Millennium Bug is one of the most serious problems facing not only British business, but the global economy today. Its impact cannot be underestimated."

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The "On the brink..." video is a non-technical explanation of the potential impact of the Millennium Bug in the world's computers and what you need to do about it.

Computers have been used to make modern society livable — it's hard to see how the infrastructure of the world could be managed without the hundreds of thousands of mainframe computers, tens of millions of desktop machines and two billion embedded microprocessors.

But on the 1st January 2000 some of those machines are going to fail and the potential results could be worse than all out global war.

The "On the brink..." 60 minute video features world-leading experts on Millennium Bug solutions and provides you with an understanding of what may be to come and how you and your family can avoid the worst. And it's a video you'll watch again and again, and recommend to your friends and their families so you'll be prepared for what may come.

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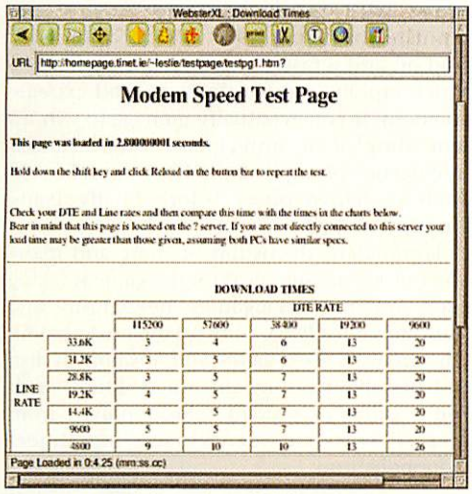
"Failure to deal with the problem could lead to commercial collapse. I put it bluntly because I want to get the message across. It will not respect national frontiers. Unless we act now, there will be international chaos."

Lord Sainsbury, Government Minister of Science and Technology

Speed testing with WebsterXL

There's nothing like a challenge to stimulate Acorn software developers into action. Seated one lunchtime at a *Windows95* PC on a business network with Internet access, I came across a Web site featuring an interesting modem-connection-speed test page by Leslie Long. As the network had a high speed link, the speed test results shown by the PC's browser were sparkling.

I noted the URL to try on my own Risc PC and Modem connection. When I got home I was disappointed to find that the speed tests use *JavaScript* to calculate the download time of the various images and files. With current versions of *Browse* from *Acorn Internet* and *Fresco©* from the *ANT© Internet Suite,* I got the 'Sorry JavaScript is not supported' message.



Are we worried about the odd billionth of a second?

Undaunted I loaded up *WebsterXL* from R-Comp, but even the JavaScript in the version I had wasn't up to the job of rendering the Modem Speed Test Page. I e-mailed Andrew Rawnsley of R-Comp with the URL and the problem. Andrew was keen to help, and started work on a new version of the *WebsterXL JavaScript* interpreter.

Within a couple of days, Andrew sent me a version of *WebsterXL* that works well with all the speed tests. I've tried the text download test page with several different ISPs. The best timings I could get with a US Robotics Courier X2 modem were:

ISP	*Speed (bps)*	*Timing (seconds)*
Demon X2	49,333	2.80
Freeserve	33,600	2.80
FreeDotNet	33,600	2.86
Enterprise	33,600	3.06

These figures compare well with the three second download time from the table on the page provided by Leslie Long for a 133 Mhz Pentium PC connecting at 33,600bps. One might have expected the X2 connection to have been faster, but it was slowed by some re-transmission requests occurring.

The Modem Speed Test Page is at http://homepage.tinet.ie/~leslie/testpage.htm and if you'd like to obtain a copy of *WebsterXL* with JavaScript support, price £25 (no VAT), e-mail rcomp@rcomp.co.uk, or visit their Web site at http://www.rcomp.co.uk/ Telephone 01925 755043.

Mailing lists resist spam

There's a Usenet newsgroup to be found on the Internet discussing almost any subject you can think of. My ISP's recently updated groups list contains 24,270 entries. Public discussion newsgroups can be an invaluable source of help and inspiration but there are some disadvantages in participating. Your own e-mail address can be e-jacked by unwanted spam and commercial e-mail address trawlers, both human and robotic.

Their latest technique is to send out unsolicited e-mail that actually looks like a reply to a message originated by you. Curiosity then makes you start to read it. Recently many newsgroups including most of the Acorn hierarchy were attacked by a spammer in another way, by using 'Supercedes'. This replaced the entire text of genuine articles with what looked like rubbish. The perpetrator was able do this by misusing a little-known remote editing function of the Usenet system.

A mailing list is a private e-mail-based discussion group which is distributed only among known subscribers, and is therefore virtually immune from such attacks. The owner of the list controls who has access and can edit and steer the threads as he or she likes. Although this could be administered manually, there is some freeware software that can do all this for you.

!MailList is an ageing but serviceable program by Maurice Hendrix, who seems to have disappeared from view. For use with only Graham Allan's *Newsbase*, *!MailList* may need tweaking before it can be used successfully, as we do on Arcade BBS to administer the *!TTFN* Mailing list. Another package that works in concert with the *ANT© Internet Suite* is *Majordomo* by Peter Gaunt, available from his Web site at http://www.beard.demon.co.uk/software/majordomo.html.

Hot HTML

John Aldred's HTML Tutor pages were originally written for Argonet subscribers, but apply equally to all platforms. The Tutors cover basic HTML 2.0-3.2, with update sections and HTML 4.0 additions on Frames, Tables, OBJECT and PNG graphics, META tags, imagemaps, Forms, Webcounters, specifying colours in HTML and animated GIFs. Downloads include an HTML validator and hyperlink checker. Among John's imagemaps you'll also find the interesting Curry Map and a comprehensive treatise on Indian cuisine.

John's Own Home Page
http://www.protovale.co.uk/john/

Free Domain freedom

EU.org aims to provide free domain name registration to users or non-profit organisations wanting to avoid the often outrageous fees demanded by some Network Information Centres (NICs). This is however not a way to get a snappy and short URL for your homepages, which requires a redirector or URL forwarding service. The EU.org site explains all about Domain Name Service record types and offers online registration service. The developers of the Zap editor now have one of these domain names, and their new Web site is at http://www.zap.uk.eu.org/

EU.org
http://www.eu.org/index.html

Acorn Relief

The Great Acorn Comic Relief Auction takes place between now and 10th March 1999. Paul Johnson has built a Web site to promote and support the event. You can bid for Acorn software and hardware from companies like Alternative Publishing, Clares Micro Supplies, Pineapple Software, David Pilling, Tau Press and more. The idea is to raise a much money as possible for Comic Relief Day 7. Initial bids cost £1 per item, and updates thereafter are free. Have a look at what's on offer so far, and then make your bid.

Acorn Comic Relief Auction
http://www.acornusers.org/comicrelief/

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.

News In Brief

Darren Salt has released a new beta version of his *ExtBASICasm* module that provides support for creating AOF files without, as Darren puts it "all of those tedious function calls...". You can locate the program on Darren's Web site at www.youmustbejoking.demon.co.uk/progs.html#extbasicasm

MDB Move

Michael-Dennis Biemans, the author of such popular programs as *ReMIDI* and *GhostScript* has moved his web pages to a new site at http://www.amplitude.demon.nl and can now be contacted by e-mail at the new address of michaeld@amplitude.demon.nl

AcornSite

AcornSite can now be accessed via a much neater URL at http://www.argonet.co.uk/acornsite/ Links to the latest versions of many PD programs can be found there, and I'd recommend PD authors to support the site by submitting details of their own programs.

GEK

Popular games team GEK now have a home page on the Web, featuring all their PD games, plus news and details about the team. It's all put together in that slightly crazy, but rather cool cartoon style. I just love the cartoon icons. Check it out at http://pages.whowhere.com/games/gekprograms/ for screenshots and news of their next production: a rather nifty arcade helicopter game.

There should also be a new PD game soon, appearing exclusively on Acorn Arcade. Edwin reveals that "a new hi-res VGA PD game is being developed by us, and it will have a size of between 7 and 10 Mb. We hope that this could stimulate interest in PD gaming. Watch this space." Most definitely. Expect a full review as soon as I get my hands on this rather promising release.

Recommended PD Libraries

- APDL, 39 Knighton Park Rd, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

One for one and all for self

One of the most famous games of all time has to be *Monopoly*: everyone seems to have owned and played it as a board-game when they were young. Various computerised versions have appeared over the years, but none as polished as a new freeware release from Duncan Mortimer, which runs completely in the desktop. Graphically, Duncan has excelled: the desktop interface works well with the icons and pictures and the overall design is of a high standard, giving an impression of quality.

However, once into the actual gameplay, I soon encountered many problems. It is a major pain trying to manipulating windows as they move around the screen, popping on and off: after a few minutes you begin to wonder if there was any point in producing a desktop version in the first place.

Use of space is not efficient, and the current main board display is just not big enough. The players' counters are represented here as simple coloured dots, despite the use of car, dog and hat icons in the player info windows: a larger board would have allowed for such details. For the same reason there is another problem – but one which affects the gameplay much more: there are no labels on the street tiles. Although these are probably quite familiar to most players, a larger view to accommodate the property names would have been a significant help.

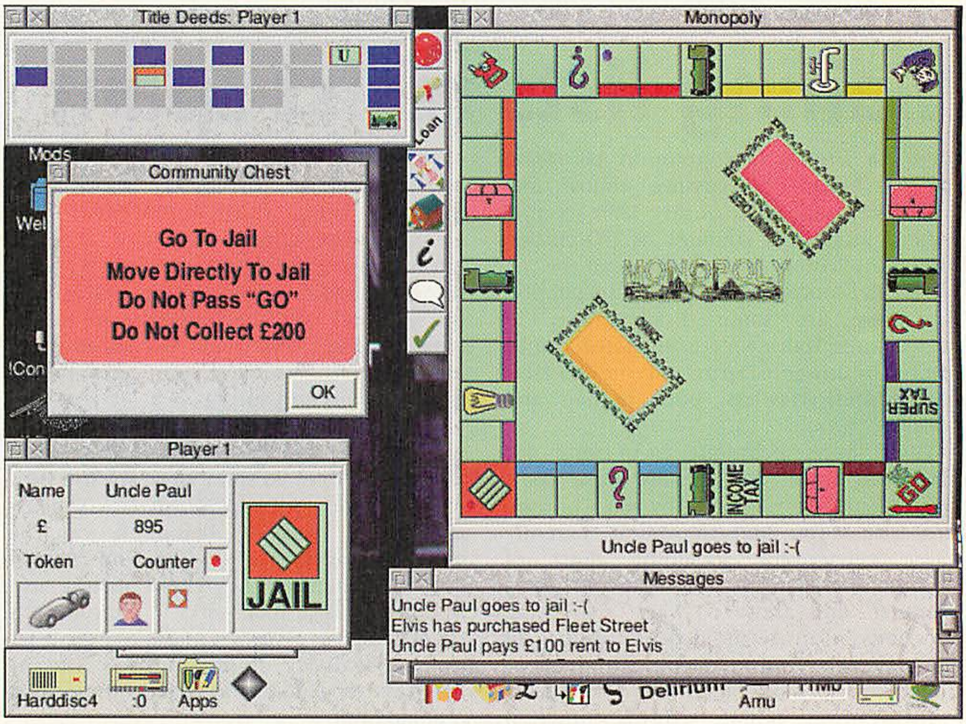
On the other hand, sound support is good, with nice samples when you land on stations or the electricity company; this could be taken further, perhaps with a speech option for such things as the dice score, what square has been occupied, and what to do next.

Other minor bugs exist in the gameplay, although Duncan is still developing the game and will hopefully have sorted them out by the time you read this. For example, the dice roll animation is too slow (fortunately, it can be disabled); there are stats on the info windows that don't match up, and a few of the original rules are not supported: these are minor niggles, but important ones.

The big question is, why would you want to play Monopoly on computer when you already own the real thing, which is surely more fun? The only reason I can think of is to make use of computer-simulated players when you don't have a human opponent. However, the Artificial Intelligence is rather poor. Bugs, coupled with stupid or completely uninventive decisions on the part of the computer, make it a rather boring experience.

The bidding and transfer Artificial Intelligence needs to be thoroughly sorted out and enhanced with more in-depth strategy. In games with more than two players, the simulated ones simply buy up everything they land on and refuse any reasonable exchanges, which rapidly leads to stalemate and extreme boredom. If you eventually manage to win it's something of an anti-climax, with Artificial Intelligence prompting the loser to make last-ditch exchange offers before finally being forced to resign.

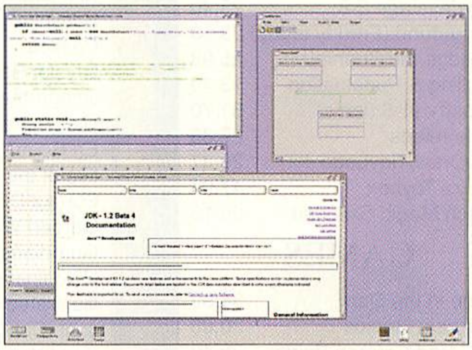
Fortunately, discussion of these and many other problems and ideas for the game is taking place on the c.s.a.games newsgroup and Duncan is already working on the next version. I'm sure we'll see a game which is both stylish and playable running on our desktops soon. You can download Monopoly from http://www.sjc.ox.ac.uk/users/mortimer/monopoly.html



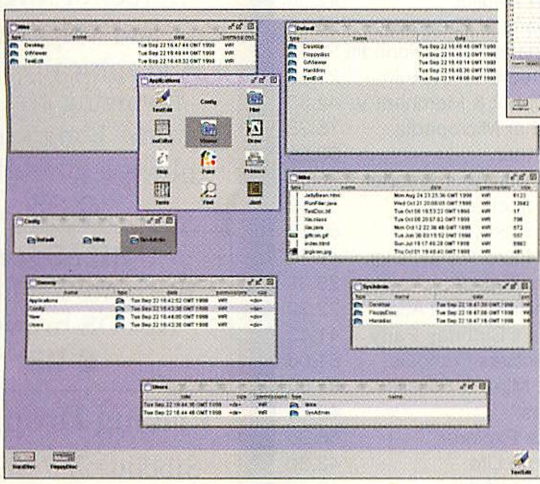
PhoenixOS

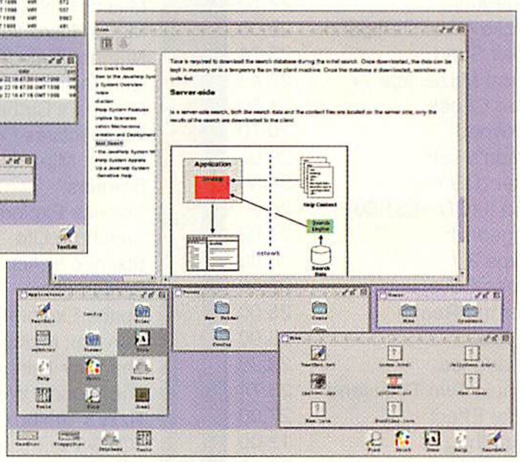
Since the shock news from Acorn, the most widespread response on the scene seems to be a renewed enthusiasm for the RISC OS way. Whether it's an "Acorn's gone, but who cares? Look what RISC OS can do" or a "let's get working on XYZ rescue plan" kind of attitude, almost everyone seems to have retained their commitment to RISC OS. More extreme than most was Mike Atkinson's reaction: he's now well on the way to coding a replacement for RISC OS.

Working under Java, Mike is creating a GUI that looks and feels like the operating system we know and love. Of course you must realise that these are very early days, and this is a GUI front-end only, not a complete OS that will run Acorn applications. It's an interesting project though; for more information, point your Web browsers to http://www.ladyshot.demon.co.uk/PhoenixOS.html



Have you seen this GUI before?





Infestation

Another new game on the scene this month is Andrew and David Stubbs' *Infestation*. Looking at first glance like a feature-packed version of *Marsquake*, it's rather an oddity when you come to play it. As always, there's an improbable narrative to set the scene. In David's words: "A large number of evil creatures have invaded the earth. Eggs have begun appearing everywhere, spawning strange bio-mechanical monstrosities. Some of these creatures are armed with deadly weapons." Put more precisely, there's a horde of evil aliens after your butt, and you've got to assemble a team of four human players to take them on.

All players are armed with an assortment of weapons from bombs and mines to guided missiles – even alien-spawning eggs of their own. Where these actually come from is not revealed – and probably best left unsaid. In gameplay terms, here is an action-packed arcade game featuring loads of weapons and a mind-boggling twenty alien types to fight.

The game is a let-down in a couple of areas. The graphics are not too hot, with very dated-looking background and character sprites. Sound effects are also a disappointment. On the plus side, this make for a small download at only 98k.

Making a final judgement on this game is tricky: to be honest, I found it hard to get into. The random movement of the aliens seems to reduce much of the action to the level of a lottery and, for me, completing levels became a matter of simply going through the motions rather than an exercise of skill. However, the game seems to be doing well on the Net, so check out the product for yourself by downloading it from http://www.fen.bris.ac.uk/students/as6966/programs/ or from the cover disk.

Demo sites

Mark Turner has completely updated his demo-related Web site "Compact But Bijou" which can be viewed at http://www.ndirect.co.uk/~mrdalliard/ As well as demo news, the site features an online demo voting system.

Acorn Arcade is now hosting the Evolution Demo Competition pages which can be found at http://www.acornarcade.com/

LZH

Skullsoft have put together a very easy to use front-end for Daniel Oram's LZH module. Compressing files with LZH from the command line is frankly a bit of a pain, but the Skulls' front-end allows simple drags to the iconbar icon to decompress or compress, depending on the current state of the file.

For more general use, Skullcrusher acts as a fully featured compaction program, offering compression by different algorithms and some interesting features like the *skeleton compress* which allows you to store an image of the structure of your hard disk in a very small archive. The LZH front-end and Skullcrusher can be located at http://www.eganc.demon.co.uk/ which also includes details of the LZH module and the WimpBasic modules which you'll also need.

Phoebe icons

David Watson, aka Spriteman, has drawn a set of desktop icons based on the look of RISC OS 4 on the ill-fated Phoebe. Why you'd want to use them I'm really not sure, as they may act as a constant reminder of the lack of a real Phoebe on your desk and, to be honest, they're not particularly attractive. I don't know whether it's down to David's re-invention of them or simply bad taste on the part of Acorn, but the colours appear quite horrible, leaving RISC OS looking like a pale imitation of MS Windoze rather than the world leader in usability which it really is. Decide for yourself by pointing your browser to www.netforward.com/the18thhole/?davew

Contacting me

You can contact the PD Page by writing to me, Paul Wheatley, at Acorn User, Tau Press Ltd, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to pdpage@acornuser.com

The Acorn Software Network

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Revision 9c

Test drive the 3mx

When Psion announced the launch of the new 3mx, I immediately e-mailed their press office and requested a review machine with the intention of producing a full review. The machine arrived and within a few minutes of using it I had changed my mind and this is all I intend to write about the new palmtop.

This is not meant as a criticism of the 3mx, far from it in fact, but what else can you say about a machine that is essentially a 3c (same applications, operating system etc) with a much faster processor which runs at 3 times the speed of its predecessor, except *it runs three times faster than its predecessor*. Even the manual is just a 3c one with a new cover.





The Psion 3mx – can you spot the difference between it and the 3c?

As an update to the S3 range, the 3mx is an excellent release. The processor in the old 3a/c was beginning to show its age and the new processor is a vast improvement – just try watching the cards being dealt out in *Patience*, if only I could deal that quickly I might actually win occasionally.

If you don't need all the features of the S5 or just want to replace/upgrade your PocketBook II or 3a/c then you can't go far wrong with this machine. After all, it has been tried and tested by thousands of users and has a huge third party software catalogue.

PsiWin 2.2

At the same time as Psion released the 3mx, they announced the release of *PsiWin 2.2*. This new version brings all the features of *PsiWin 2.1* (file synchronisation, full conversion facilities, integration into the Windows desktop and so on) to the S3 range of palmtops as well as the S5.

The new version also introduces a new integrated clipboard for S5 users allowing them to copy text on the PC/Psion and paste it straight to the other machine. The package also includes some new data template files to assist users with the synchronising of files, the synchronisation database has been updated to include the latest versions of popular PC applications as well as numerous other smaller improvements and bug fixes.

The CD also includes a copy of the S5 Message Suite, the OPL and Comms manuals in PDF format and a selection of utilities and trial software for the S5.

The software is available for S3 users with or without the connection lead (£34.95 and £49.95 respectively) and users of *PsiWin 2.1* should contact Action Computers on 0800 333333 for details of upgrades.

Geofox failure

Geofox, one of the first licensees of the EPOC32 operating system has sadly announced that it has been forced to cease trading and that the company has gone into voluntary receivership. Although not heavily featured on this page, the Geofox-One was similar to the S5 but had a larger screen and hence case and was operated by a touch pad rather then via a touch sensitive screen.

Geofox released the following statement: "We have been seeking investment into the company for some time, but despite good reviews and increasing sales channels and prospects for Geofox-One we have not been successful in obtaining the necessary funding, or in finding a purchaser for the company."

Although Geofox is no longer trading John Woodthorpe (author of Archive Magazine's S5 Column) has said he will continue to provide support for the Geofox via his web site at http://www.armlink.ndirect.co.uk/

Message Suite reprise

Just after the last column went to Press, Psion released version 1.52 of their *Message Suite*, which fixes the majority of the bugs that existed in the first release of 1.5. The new version is available as a download from their website (http://www.psion.com) and is well worth downloading and installing.

Newer shade of purple

Purple Software, one of the largest developers of software for handheld computers, recently re-launched its web site. The new design includes a novel menu-style navigation system and the content has been completely updated.

The new website already includes the facility to join the Purple Software mailing list, full online ordering and numerous links to other PDA sites. The URL is http://www.purplesoft.com/

Draw it on your S5

Draw5 is a vector-based drawing package for the Series 5 and Geofox-One from Interconnex. Features of the package include the ability to build up images using several tools including ellipses, rectangles, path objects (straight lines and bezier curves), text and embedded documents from other S5 applications. *Draw5* allows the user to group objects together and manipulate them either individually or as groups. Each object can have individual attributes including line thickness, pattern, colour and font style.

The package is able to import and export Windows WMF files offering a degree of compatibility with the desktop environment (although it's a shame it can't handle Draw files).

Documents created in *Draw5* can have either 4 or 16 shades of grey and can be embedded into other documents (Word or Sheet).

***Draw5* is shareware, with a registration fee of £25, and is available for download from Interconnexs website at http://www.interconnex.co.uk/**

Go green with the 5

Psion has recently announced the launch of a special edition aqua green Series 5. The special edition machine is also supplied with a quality leather slipcase designed by specialists Mulberry.

The case on the special edition S5 is reported to be a hard case, similar to that found on the S3, as opposed to the rubber one of the standard S5 which was prone to peeling. The special edition went on sale from branches of Dixons and John Lewis at the end of October priced at £449.95.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at Acorn User, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to portables@acornuser.com

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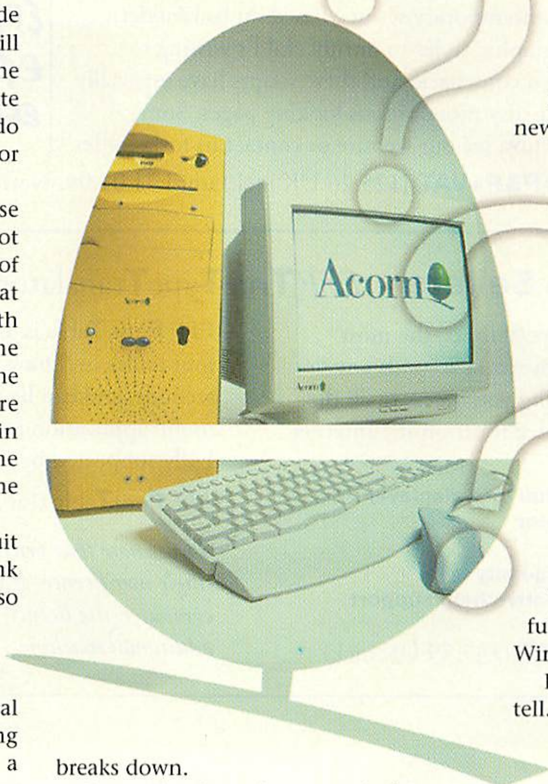
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Whither or Wither Acorn

Hopefully by the time you read this the situation regarding the workstation side of what was once Acorn Computers will be clearer. I have read so much on the subject – some helpful, some intemperate and more than a little twaddle that I do not wish to add greatly to the debate or queer anybody's pitch.

Having said that everybody else has had their two 'pennorth so why not me? From a purely business point of view it was long since obvious that Acorn could not compete on price with the flood of cheap PCs. Forget the high price of ownership caused by the short life of the average PC before you crossed the upgrade/buy again line. Quite frankly it soon became cheaper to buy a new PC as yours became obsolete.

A machine which lasts does not suit our throw-away society. You might think you are not part of such a society but if so you are not being honest with yourself. Want to test your honesty? OK – ask yourself this question – when did you last take a piece of electrical equipment to be mended? Something like a toaster, a kettle, an iron, a TV, a video, a camera (video or still). Yes – you get the idea. Obsolescence is built in and we are programmed to reach for the Argos catalogue as soon as something not under guarantee or extended warranty breaks down.



Longevity is only a good thing given an upgrade path and Acorn, producing a new computer every 4-5 years could not keep up. Of course it is not just their fault. The software has fallen behind and the disastrous link up with Xemplar also contributed to the demise of workstation Acorn. Why disastrous? Look at any Xemplar brochure or newspaper advertising campaign and you will see why. Not so much a case of not seeing wood for trees as not seeing Oak trees for Apple trees.

So does Acorn (the computer) go the same way as other famous alternatives to the ubiquitous PC beginning with A – Amstrad, Amiga and Atari? Well, yes – it probably does. If Phoebe does achieve a production run it will almost certainly be the last true RISC OS based home computer. Those advocating a Linux front-end future for RISC-OS are forgetting X-Windows.

Pessimistic or realistic only time will tell. In the meantime I hope that another couple of my series on the use of Acorns in business elsewhere on this page convince you that the computer you have is still more capable and easier to use (when did you last have to re-boot an Acorn?) than any other available alternative.

Acorns in business

Another couple in this occasional series – told in readers own words of how Acorn computers are used in real world particularly in business. First a message that popped upon the Internet a short while back:

Swiss Cheese

Just through I'd share a discovery that I made today. While in a large secure machine room doing a software installation (on Sun Solaris), I happened to see three Risc PC's sitting in a rack nearby among multitudes of big Suns, Compaq machines, IBM AS/400's and the like.

They were running a bespoke application for a stock market data feed. I have a feeling that this application is a development from a Reuters one, but I say that only because I know that Reuters have made heavy uses of Acorn hardware in the past and that Reuters are heavily involved in stock market data.

I asked the system engineer that I was with what he thought of them. His reply was approximately, "Apart form being another hardware platform/OS to understand – fine. They are as stable as bedrock". It was nice to see Acorns in a mission critical application.

Nick Smith, Software Engineer,Switzerland

Need a CV?

I have recently started a small business using my Acorn. I design CV's with the option of e-mailing them to clients who have a computer. Otherwise I send them by good old snail mail or fax (again from my SA Risc PC).

E-mail is perfect for this. Clients e-mail their old one where I work on a new version and e-mail it back. This way they don't need to go out of their home to find a place that does CV's or wait around for the final print. I often send the final CV by post because of the quality paper I have at home.

I also design posters (using *TextEase* and *Artworks*) and other printing/ design needs are considered by customers. Some might want wedding menus printing or business brochures for small businesses.

My only complaint about using an Acorn for this type of art is the lack of good printer support. I want photo quality like PC users obtain. I can't afford a colour laser printer yet.

Ian Vincent
ian.vincent@argonet.co.uk

So keep the stories coming. I realise than most businesses using Acorns will be small by any definition but that does not make them insignificant. Perhaps the greatest failing of Acorn was its inability to convince the business user that there was and still is an alternative to the PC running Windows. Let's keep trying.

Contacting me

You can contact me, Mike Tomkinson, by post at the usual Acorn User address or by dropping me an e-mail at: bizniz@acornuser.com

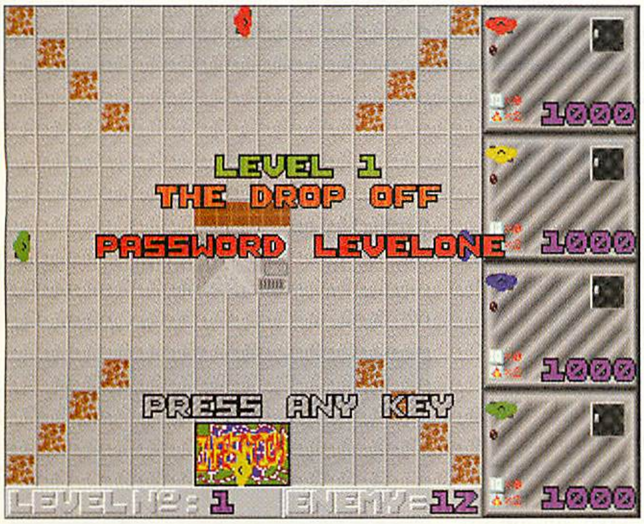
cover disc



Infestation

A large number of evil creatures have invaded the earth. Eggs have begun appearing everywhere, spawning strange bio-mechanical monstrosities. Some of these creatures are armed with deadly weapons.

Military intelligence has located the source of the creature's infestation – a large, heavily guarded teleportation device. You have been given the mission to destroy this device. Unfortunately the nearest you can get to the device by helicopter drop isn't close enough – you're going to have to fight you way by foot through infested territory to get there.



You have been armed with triggered missiles, mines, bombs and a reverse-engineered creature spawner. This last piece of equipment will allow you to spawn creatures which will work for you and your team.

Keys are set for each player from within the infestation desktop application. Click menu on the *Infestation* icon and open the 'Controls' submenu.

To launch a weapon, press and hold Bomb (push up twice for down the fire key, push the relevant a larger bomb) direction key then let go of the fire key. While fire is pressed the currently selected weapon will be displayed in the player's info panel.

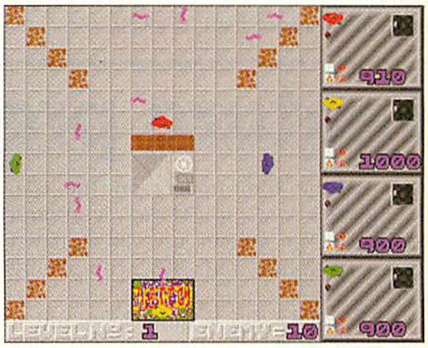
Four people around a keyboard gets a tad interesting, and I take this opportunity to say that I take no responsibility for broken fingers. The upshot of this is: if you have a joystick and port, use it.

Teams and Alliances

In *Infestation* players may choose to share a common pool of energy. Players wanting to do this should be in the same team. Players in the same team may not harm each other. To select the teams open the 'Game Opts' submenu from the main menu, and drag the relevant player to the chosen team. The default option is for no teams (each player is a different team).

If players do not wish to harm each other, but do not want to share energy they may set up alliances. Alliances are set up between teams and are set in the 'Game Opts' window underneath the team selections. Selecting an option icon in the grid will set an alliance. Underneath this grid a message will describe common combinations such as 'Total friendship'. This message assumes there are four teams. Some alliance structures can be quite complicated and it may be difficult to see who your enemies are.

Each player is awarded 1000 units of energy at the start of the game. This energy is added to the team's total. A team with four players will start with 4000 units of energy. When a team's energy



reaches zero, the entire team will die.

Energy is used when a player is caught in an explosion or a player plants some kind of weapon. Bombs are least expensive followed by mines then missiles. Eggs are more expensive the larger they get.

Mines are clever. Once layed they will only explode should an enemy walk over them. This means you can walk over your own as many times as you like. But be

The creatures

Worm[†]	Will try to eat you
Lawnmower[†]	Will try to shred you
Spider[†]	Will try to eat you
Bomber[†]	Plants bombs
Blob[†]	Plants bombs and mines
Tank[†]	Plants bombs and mines and missiles (ouch!)
Minelayer	Plants mines
Rocket Launcher	Plants missiles
Spark	Fast, and goes for the throat
Vacuum	Slow, eats mines
Crab	Eats bombs
Token tout	Plants tokens
Tokenguzzler	Token eater
Bomb	Turns into a bomb
Missile	Turns into a missile
Ice builder	Found making ice sculptures (snowmen), and igloos
Digger	Slow, yellow and makes a good bit of rubble
Oil Tanker	Slow, plants oil rigs
Conservationist	Plants trees and bushes
Mega tank	Fast, plants bombs, mines, and missiles (double ouch!)

[†] *Can be laid by a player*

cover disc

careful, they only last 40 seconds before spontaneously exploding.

Targeting missiles are also clever. When they are planted they spin on the spot until they see something you are an enemy with. They then take note of the square and attack it passing any creatures, players or objects on the way and exploding in the correct square. As long as the creature or player was not moving too fast it should be hit by the explosion. The explosions they cause are very effective.

Eggs are what the computer and players spawn. These eggs usually take about 10 seconds to hatch. The size and shape of the egg gives an indication as to what will come out from it. Destroying an egg will prevent that creature from hatching. The level's *creatures to go* counter will be reduced if the egg is evil.

Loading levels

If you wish to play a level group that is not the default, simply open the sub-menu 'Game Levels' and select the group you want from the selection. You must make sure that the filer has 'seen' the *!InfLevels* application, otherwise *Infestation* cannot load its levels.

Tokens

Flame	Increases the distance the flame from your bomb will reach
Eatability	Allows a player to eat bombs to gain energy
Pushability	Allows a player to push bombs (not through walls or objects)
+50	Increments team's energy by 50 units
+100	Increments team's energy by 100 units
+150	Increments team's energy by 150 units
-100	Decrements team's energy by 50 units
No bombs	Player may not drop bombs
No missiles	Player may not drop missiles
IQ	Eggs spawned after collection are more intelligent
Invincibility	Player may not be harmed by anything
Anti-grav	Player may walk over enemy mines
Level warp	Team is warped a certain number of levels. If more than one team is playing they will carry on as normal. The warped team will rejoin at the appropriate level, even if all other teams die before this time.
Lottery	This token can do a variety of things, both good and bad.

Feature presentations

To view the film trailers on the CD, double-click on the *!Movies* icon and just wait. The system uses an updated Replay system, but it's completely transparent.

Each movie clip is quite long and if you want to skip to the next one click Menu on the mouse, you can pause it using Select.

The screenshots on these pages are mostly taken directly from the Replay files and will appear blurred if there is movement in the frame – when the trailer is being run you won't see it.

Blade (18)

Adapted from the comic strip of the same name *Blade* stars Wesley Snipes as a half-man half-vampire out to revenge his mother's death, while the forces of evil try to capture him for their own purposes. Also starring Stephen Dorff, Kris Kristofferson and N'Bushe Wright.



What Dreams May Come

A sad but powerful tale about Chris Nielsen, played by Robin Williams, who dies in a car crash and, in the afterlife, begins a search for his wife after he discovers she has committed suicide in her grief. Also starring Annabella Sciorra and Max von Sydow.



Little Voice

Wonderful independent British production from the Director of *Brassed Off* based on Jim Cartwright's play *The*



Rise and Fall of Little Voice. It's the story of "Little Voice" (Jane Horrocks) who is able to mimic the greatest singers – Judy Garland, Marilyn Monroe, Marlene Dietrich and others, all sung by Jane









Credits

Acorn User would like to thank:

Trevor Green (Managing Director, Entertainment Film Distributors); Julia Short (Head of Marketing, Polygram Filmed Entertainment); and Laurence Atkinson (Publicity Manager, Buena Vista Film Distribution) for supplying the clips.

Plus Paul Middleton of Uniqueway Ltd (01222 464020) for sourcing and preparing the clips in Replay format.



Horrocks herself.

The script is intelligent and hilarious and there are superb performances by the British cast including Brenda Blethyn, Jane Horrocks ("Bubbles" from *Absolutely Fabulous*), Michael Caine, Jim Broadbent and Ewan McGregor.

Lost in Space (PG)

Fun remake of the completely awful (but strangely addictive) 60s Science Fiction TV show. The Robinson family are sent into space to help construct the other end of a hyperspace gateway in order to



save humanity. But they get lost on the way.

Starring Gary Oldman, William Hurt, Matt LeBlanc and Mimi Rogers this is not a film to be analysed closely but it's great fun, plus true fans will love all the references to the TV series plus seeing some of the original stars playing other roles in the film.

The Mighty

The story of two adolescent friends, the small brainy one and the big, not so bright, tough one – who together form "Freak the Mighty" and set out on imaginary quests. It's a genuine tale that doesn't get sentimental, Kieran Culkin (younger brother to Macauley) is excellent as is Sharon Stone, there's also a cameo by Gillian Anderson – nothing like Agent Scully.

Pleasantville

Another fun movie, two modern-day teenagers are pulled into two teenage roles in 1950s TV soap *Pleasantville* where everything is perfect and in black and white – not only that but the people in the soap know that all is black and white, and there is nothing outside Pleasantville. As the film progresses the two slowly break down the middle American values in the town.

Starring Toby Maguire, Reese Witherspoon, Jeff Daniels, Joan Allen and William H. Macy.



Return to Paradise

On a par with *Midnight Express*, this powerful film demonstrates the changes in the lives of three men: one on death-row in Malaysia for drug-trafficking and his two friends who can save him – but at the cost of three years of their own lives in a Malaysian jail.

Excellent performances by Vince Vaughn and Anne Heche. Not for the faint-hearted.



Regular & Features

- The Java examples
- Run the Risc software
- All the *INFO programs

Extras

- Getting onto Freeserve

Disc information

The software on the cover disc has been compressed using ArcFS 2 from VTi, and are opened by running a copy of ArcFS then double-clicking on the archive to open it. There is a copy of ArcFS on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover discs have been checked for viruses using Killer version 3.001 from Pineapple Software.

I hate CDs

If you don't have a CD-ROM drive you can replace it with a floppy containing this month's *Acorn User* programs simply by returning the cover CD to: *Acorn User, Tau Press Ltd., Media House, Adlington Park, SK10 4NP.* We will send you a floppy disc containing the programs and files for this month.



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Rhapsody 4



Simon Anthony looks and listens to the latest Clares music package

I have always had a musical ear, one with a classical bent to it. Years ago, at the dawn of computerised music making on the BBC micro, I bought a copy of Island Logic's *Music System*. Ever since then I have wanted an up-to-date music application that would let me – a non-musician but almost professional listener – compose the music I know I've got in me in the way that Island Logic did.

The Ample programming language with the Hybrid hardware came next but suffered from a messy interface with no real feel to it. A tool to let the music out without getting in the way of the flow would be a wonderful thing. Such a tool has existed for ages in the form of the expensive but otherwise splendid Sibelius package and now at last it is available as an affordable and very powerful package from Clares.

Rhapsody is an old name but version 4 is a totally re-written package which does just what I have been looking for at a price I can manage; in terms both of money and the time taken learning how to use it. This will not be a *what happened next* follow up to reviews of earlier versions of *Rhapsody* as that has been done before in other places. This is aimed at the newcomer as an introductory view.

Clares say that the minimum specification for running *Rhapsody 4* is a 4Mb RISC OS 3.1 machine with a hard disc and at least an ARM3. Clares have made a musician's tool – or so it looks to me – but one which is not off-putting to those of us who aren't already musically trained. Within a few minutes of getting it running I had created my first not-very-musical offering. But I did have to get it running to start with.

Setting up

The review machine was a Risc PC SA (with too much memory cos it's cheap these days). What I did not have was a lot of free space on my hard disc. About 3Mb is required for a full installation which equates to over 10Mb if your hard disc is a big one – individual files take up much more space on a big drive because of the Logical File Allocation Unit – maybe not an obviously relevant comment here but essential to know about at any time.

Figure 1 shows the standard Clares installation screen as tailored for Rhapsody, their credit system allows two installations, one to work with, one for backup. Ensure all the ticks are in place for a first installation, repeating the job later after an un-installation takes only a few seconds with all but "Install Application" left un-ticked as only the credit needs to be put back. Halfway through my initial installation the drive filled up and aborted showing me a window which left me worrying that one 'life' had been irretrievably lost.

But no, all was well, however I had to un-install the failed copy to recover the lost credit and then free up space on my drive before trying again. I don't like this installation system but we have to put up with it in a world of software pirating. Clares offer

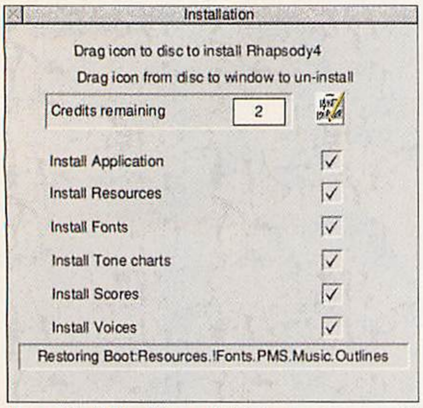


Figure I: Installing Rhapsody 4 takes away one credit

a £500 reward for information leading to a conviction. Be very careful when entering your details because apart from anything else you will see them every time the application starts up.

First run

Once all was happily on the hard drive and running; clicking the new-look yellow pen icon on the bar brought up the welcome banner and a version of the now ubiquitous 'Tip of the Day' window followed (20 odd seconds later or after a rapid click which clears the banner) by Figure II. The first of these shows a view through the main symbol menu window.

This is possibly the most versatile window I have ever used. It is not only multi-function but also has at each end of the lower part of the window chevrons and arrows. These point in the direction in which you can horizontally scroll or flick your way from one end to the other of over 200 notation symbols. These symbols are shown only when the window is in one of the three possible symbol entry edit sub-modes, more of which later. Symbol edit itself is selected by clicking on the icon shown highlighted to the right of the red Delete cross icon at the top of Figure II. This is the default situation.

For a first day with Rhapsody 4, I suggest leaving the selected icons where they are and move on to where the music gets written. As it's default this window shows a treble clef on a stave; you don't have to worry if you don't know what one is as you can still make music with it. To the left of the clef is it's name in red and the associated internal voice and MIDI details if any.

If you jump in feet first and try to make sounds without looking at the book you can manage a wave-synth beep for each line of the stave clicked on. Clicking gives the window input focus and once it's there two red lines containing a yellow slider – the entirety called the cursor – are displayed. These arrows sit either side of the musical symbol which can now be edited – or the yellow zone space between the red lines can be worked on. In this editing mode the keyboard arrow keys will move the on-screen cursor around left and

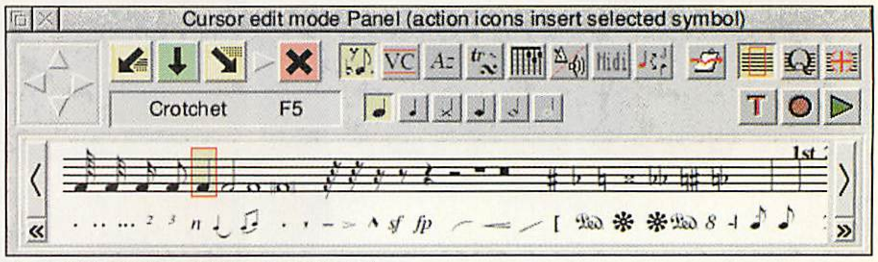


Figure II: The main panel in cursor edit mode

right along the music and will move the arrows up and down the stave – playing a note at the appropriate pitch as it goes.

There just had to be a way to stick a note in place using this method, this is a facility I greatly miss from the old BBC days. Pressing the space bar did the trick. To add a note in front of the current space press < (a comma really as there is no need to press Shift as well), to add a note after it press > (the full stop un-shifted). There are many ways to do the same thing in Rhapsody, one of them is bound to fit your way of working.

For example with a few extra clicks a note's pitch can be altered. First press delete to kill the note nearest the targeting red arrows in the yellow cursor edit zone. Now move the up/down arrows to the right place on the stave and then click Select on the green downward pointing arrow as shown at the top left of Figure III. Or, drag it with Shift+Select. Or slip it up or down with Control+Shift+up/down. The red cross would also delete a selected symbol and the left and right downward pointing arrows in that window would place a new note to the left -before- and right -after- the selected note.

This flexibility feels very good to me but if one method is a bit too cumbersome or slow for you try one of the other editing modes or use a mixture of them all. They can be switched between by hot keys as well as by use of the window icons.

The ergonomics of note and symbol entry are very much a personal thing and so the program has been written to cope with the many and varied methods which amateurs and maybe even the odd real pro may use. Certainly all the frills one would expect from a truly professional music package are here but they just take a bit of looking for.

By using just the simple stuff it is easy to produce something like the tune shown in Figure III very quickly, it's also great fun and educational too. Musical notation entry mistakes such as too many or too few notes and/or rests in a bar are flagged automatically, the message being removed when you get it right. This is very helpful as the music can sound rhythmically very odd when what was right gets put out of step without you noticing what you did wrong. I have no doubt the facility can also be turned off. Bar lines can be added automatically too.

When you get in to it full scores can be produced such as are demonstrated with the package. Figure IV shows part of a little thing by Bach, it is only lack of paper which stop me showing a full size score as Rhapsody 4 can handle entire orchestras.

Symbol entry mode is just one of eight displays which the main window can present. Each has the same top half containing the icons with which the multiple alternative lower halves are selected. They can be selected by clicking on the icons in the top half, from the left they are: Voice and Program changes to the MIDI setup, Text and Lyrics editing and display facilities, Trills and Trill definitions, Guitar Chords – which for some reason killed my copy of the program every time I clicked on its Play button. I think there may be still a few problems here.

The list of icons continues with Tempo, Volume and Expression changes, MIDI event data and finally something which is called "Other editing tools" by the interactive help program. These are duplicate commands to essential keyboard short-cuts which are so detailed that anyone would need help remembering them. Add the assistance of the Acorn interactive helper here again and all of a sudden all the things you wished you could do with the score but thought you couldn't become easily possible. For example making two notes into a syncopated dotted rhythm with Control+Y (^Y).

There are six icons just to provide kerning to make the display look perfect,

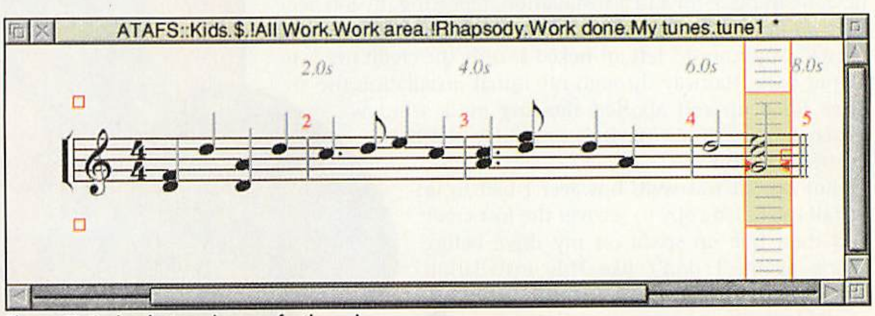


Figure III: A simple tune is soon forthcoming
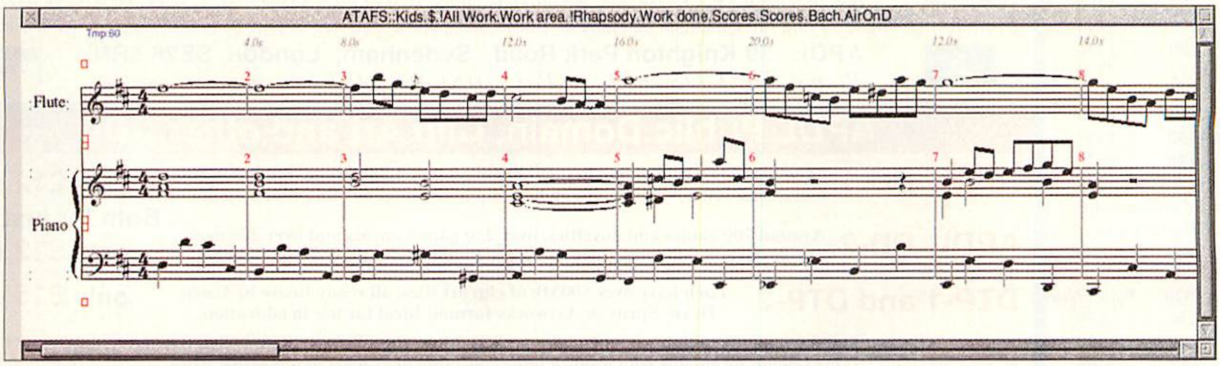


Figure IV: The product is verstaile and sophisticated *enough* to handle Bach

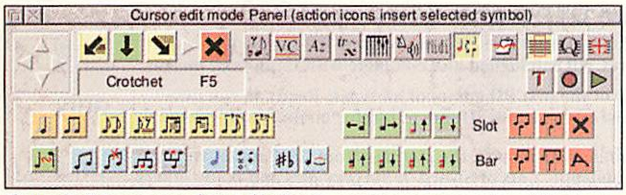


Figure V: You can tweak the display to produce very good quality views

among many other tweaks. The window in this mode is shown in Figure V. The three versions of the edit modes are Cursor mode (the default as described above), Quick mode where clicking on the symbol enters it at once to be positioned with the cursor keys and Drop mode editing where clicking on the stave enters a pre-selected symbol at once where you clicked. Another nice point is that the title bar shows the new editing state of the window. How many other applications do this?

I don't like the Acorn help application, and nor do Clares because they provide Bubble Help as well as sundry other handy tools as shown in Figure VI. A strange omission is a lack of an electronic on-line helper running in something like *!StrongHelp* but I am told this is in production as we speak. At a first glance it may look as if a major omission is the lack of Undo-Redo, I need this facility frequently in wordprocessors (and don't have it there either) but anyone who can use the system at all can also redo what they last did so very fast that it could be a waste of function key real-estate to use up two for this facility.

There is a clipboard facility which is designed to be used when large areas are being worked on, copied or deleted. The manual explains that function key oddities exist but only after careful thought, inasmuch as Save is not on F3, it is F11, F1 to F10 are used as symbol short-cuts and it would be a pain to have a normal F3 function.

The power of this package comes in with the use of MIDI, the Music Instrument Digital Interface. This requires the computer to have the requisite hardware installed and working correctly.

When I first tried it my card was not set up at all and when it was asked to make a sound by Rhapsody the whole machine crashed. This looked as if it was a Rhapsody fault, but it persisted even after two complete re-installations but went away at once when I took the ailing board out. Unfortunately there was no sound at all then.

This was eventually found to be due to the fact that Rhapsody assumes that MIDI is in and working and so defaults to using it, Rhapsody has to be hand-shifted back to the internal sounds before it will make a peep. Dave Jackson at Clares immediately e-mailed me a fix – even though it was my board that was at fault but unfortunately I didn't get it working in time for this review. Watch this space for further details.

Of particular importance for any major application is the manual. This is a ring-bound tome packed full of very easy to read, well indexed and as far as I can see accurate and complete details essential for the learning curve – but not essential to having fun as after only a while you will be using it like a pro.

The manual is laid out like an extensive tutorial starting with the basics and ending with customisation options.

Printing out from Rhapsody has its own section in the manual. Multiple formattings for each piece can be achieved and saved with it which will produce a totally professional output with all the trimmings – but an explanation and an understanding of that together with about 99% of the other features of this massive application will have to wait until you buy it.

I thoroughly recommend this application as it provides all I could wish for and a lot more besides. I am looking forward to playing at my MIDI keyboard and then editing the result on screen. Step-time, semi real-time, real time, note by note, chord and note clusters, any type of composition and notation, you name it, it's there. There is no doubt that the application will grow with you but this purchase will not leave you wishing for more – you will already have it. A real pleasure and a reliable tool. AU



Figure VI: There are a few other programs you get as standard

Product details

Product:	Rhapsody 4
Price:	£100 inc VAT (£69.95 upgrade from Rhapsody 3, other discounts available with other Clares music products)
Supplier:	Clares Micro Supplies, 98 Middlewich Road, Rudheath, Northwich, Cheshire CW9 7DA
Tel:	[+44] (0) 1606 48511
Fax:	[+44] (0) 1606 43512
Web:	www.claresmicro.com (available soon)

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'Plus i/face' price includes an APDL fast IDE interface.

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60 Mb	£49	£99
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120 Mb	£67	£117
170 Mb	£72	£122
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2.1 Gb	-	£197

A3010/3000 includes APDL IDE interface, A3020 includes fitting kit

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1 Gb		£79
4.2 Gb	h/h	£159
4.2 Gb		£185
8.7 Gb	h/h	£309

'h/h' indicates half-height approx 1½ inches high, others are 1" high.

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32x	£49
36x	£54

Drive including APDL IDE interface

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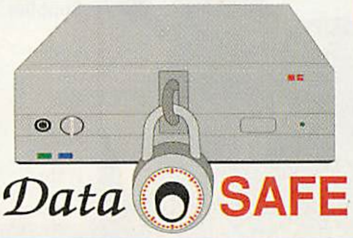
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Prices start at £104 or with a 3.2Gb drive from just £199

Life, the universe and Java PART 2

Mark Moxon continues his series on RISC OS Java programming with a closer look at how Java programs work

Before I kick into a breakdown of the example program I showed you last month, there's a little bit of groundwork every Java programmer should understand. I know I promised not to overload you with boring jargon, but here are three fundamental words that you should know before embarking on a Java journey: methods, objects and classes. I'll give a quick breakdown of what they mean, and then move onto something far more interesting.

In Java we call functions *methods*. In our example program **init()** and **action()** are methods: there is a subtle difference between Java methods and C functions, but it's not enough to keep you awake at night. Method names should be written in mixed case, with the first letter in lower case and the first letter of each subsequent word capitalised, as in **addEntryToMenu()** and **checkStatus()**. When talking about them I will always put brackets after method names so it's obvious that they are methods and not simple objects.

A *class* is a collection of methods, variables and constants, all lumped together in one place. Classes can be based on other classes; this is known as inheritance and is one of the powerful aspects of the Java class system. One example of a common class is the String class, which provides Java with lots of methods for manipulating strings. Class names should be in mixed case with the first letter of each word capitalised, as in **WindowFrame** and **CountryAttributes**.

An *object* is defined as 'an instance of a class', which is about as clear as mud if you're not already an object-oriented programmer. In simple terms it's easier to think of an object as a variable whose type is a class, so to create a button you would define an object of class **Button**, or to create a label you would define an object of class **Label**; both **Button** and **Label** are classes because they are a combination of methods, constants and variables all neatly packaged up into self-contained entities.

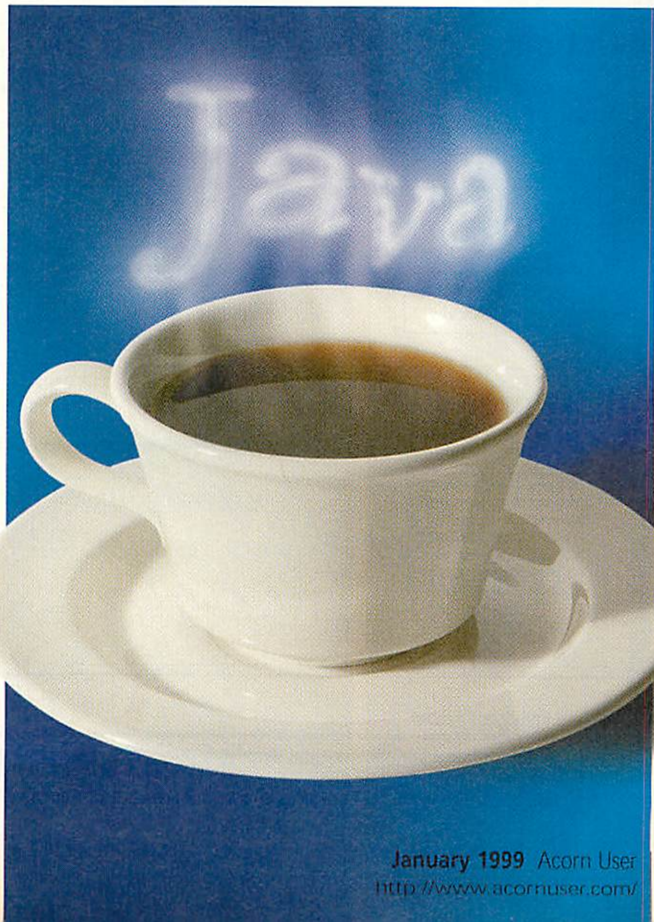
Object names that are available to entire classes (these objects are known as 'fields') are written with the same mixed case as methods; you can tell fields and methods apart because methods always have brackets after them. However for objects that are local to specific methods the convention is normally to use all lower case, though many people stick underscores in there too.

So, programming in Java is all about creating and manipulating objects of certain classes using various methods. It's a lot more exciting than that description makes it sound, believe me.

A typical Java program

Onto our example program from last month, then, which is on this month's cover disc as *Ex01/java*; you can look at the results of running this applet by loading the HTML file *index/html* into your browser and looking at the 'Basic program structure' section. Going through the program line by line will help us to learn quite a bit about Java, but don't expect to understand everything straight away: as with all languages, it's using it that really teaches you how to speak it, and we'll be looking at everything in more detail as the series proceeds.

Some fundamentals: Each complete statement is terminated by a semi-colon: without the semi-colon Java will give you lots of errors because it doesn't consider simple carriage returns to be statement terminators (this is like HTML and C). Also multiple



lines of code can be grouped together by enclosing them in curly crackets, which can be nested. The whole of the main **Ex01** class definition is grouped together in this way, and other examples include each of our method definitions in the program, and the **if** statement in the **action()** method.

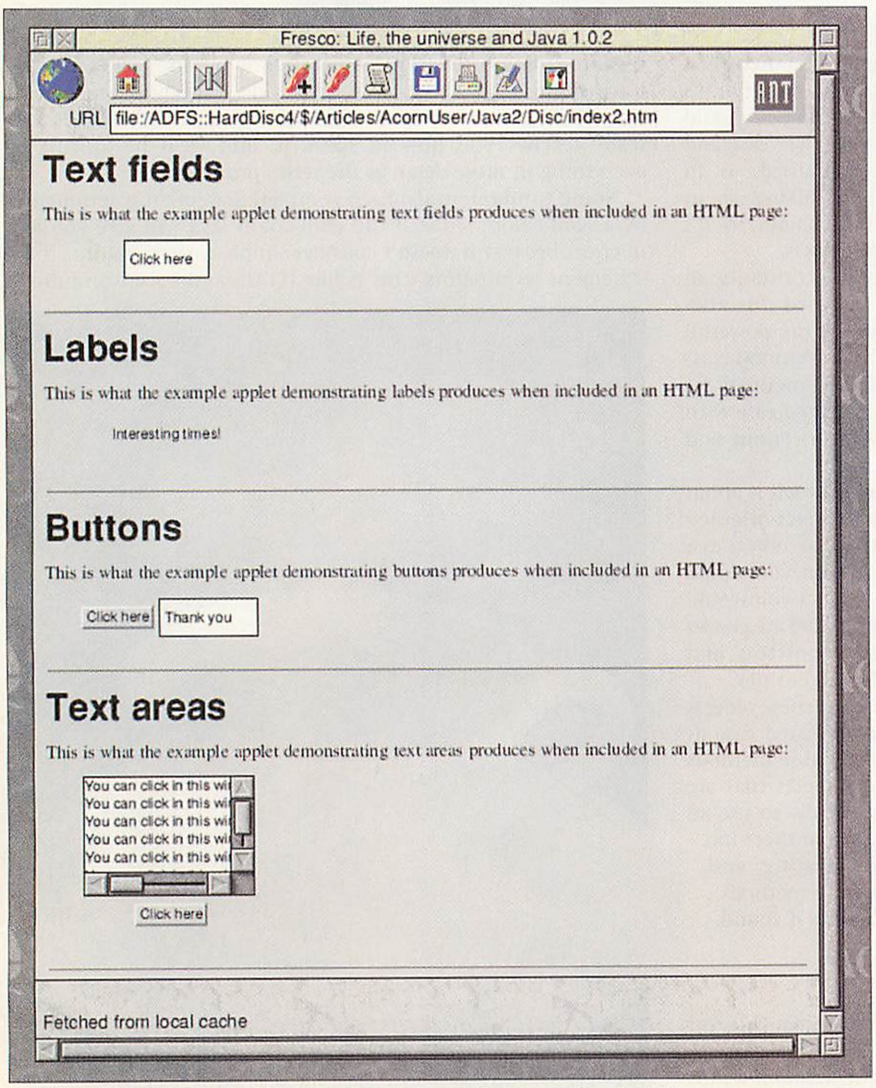
The import section: At the start of most Java programs you need to tell Java which class libraries you will want to use. The class libraries are part of Java itself and simply contain all the classes that make up Java (and hence all the methods, constants and variables); unlike BASIC you have to explicitly load class libraries if you want to use their methods. The **import** statement is similar to **#include** in C, and in our example we import the **Applet** class (as our application is an applet) and all the **awt** classes (members of the abstract windowing toolkit, which provides classes for buttons, menus, windows and so on).

The class definition: Java programs are mainly made up of class definitions (which, as we have seen, contain method, variable and constant definitions). Our program contains one class called **Ex01**, the definition of which is introduced by the **class** statement in the third line in the program. The **public** part means that the class can be accessed by all programs and the **extends Applet** bit means that the program is an applet (in other words it can be embedded in a web page with a specified amount of page space) as opposed to an application (which is generally a stand-alone program).

Variable declarations: The **Label**, **TextField** and **Button** lines declare three objects, giving each object a class and a name. These statements don't actually allocate memory yet (the **new** statement does that) but their positioning defines what is called the *scope* of the objects, or which parts of the program can actually access these objects. In this case the objects can be accessed by any methods defined inside the **Ex01** class, namely the **init()** and **action()** methods: in other words these three objects are fields.

The init() method: In an applet the **init()** method is called automatically when it is run (in an application it is the **main()** method). The **Ex01** applet's **init()** method defines and adds a label, a text field and a button to the display. The **void** part of the method definition means that the method doesn't return a value, unlike the **action()** method which is defined as returning a boolean (true or false) value. Note also the empty brackets in **init()** which show that **init()** is a method that takes no arguments; **action()**, on the other hand, takes two arguments, an event and an object of unspecified type. The brackets must be included even if there are no arguments.

The action() method: This method is called when an action, such as a mouse click on a button, is performed. Our **action()** method checks to see if it was our button that was clicked, and if it was it sets the text in the text field to say thank you. The method returns a boolean value: we'll look at why in a moment.



Text fields, labels, buttons and text areas as shown by Fresco and Acorn's JVM

Creating and adding objects

Now let's take a closer look at the two main parts of the program, the **init()** method and the **action()** method. The **init()** method is made up of three pairs of lines; the first line sets memory aside for an object, and the second adds that object to the applet's display.

Memory is set aside for an object using the **new** command, where **new** is followed by what is known as the *constructor* for the relevant type. An object's constructor is simply a method with exactly the same name as that object's class, so to create a new button you would use **new Button()**, and a new text field would use **new TextField()**.

Most constructors can take arguments to enable initial values to be set at the same time; all the definitions in our example program have arguments, denoting that the label **label1** initially contains the text 'Text field:', that the text field **text1** is ten characters long, and that the button **button1** initially contains the text 'Click here'. These values can be changed later if required, so if we allocated memory to **label1** with the line:

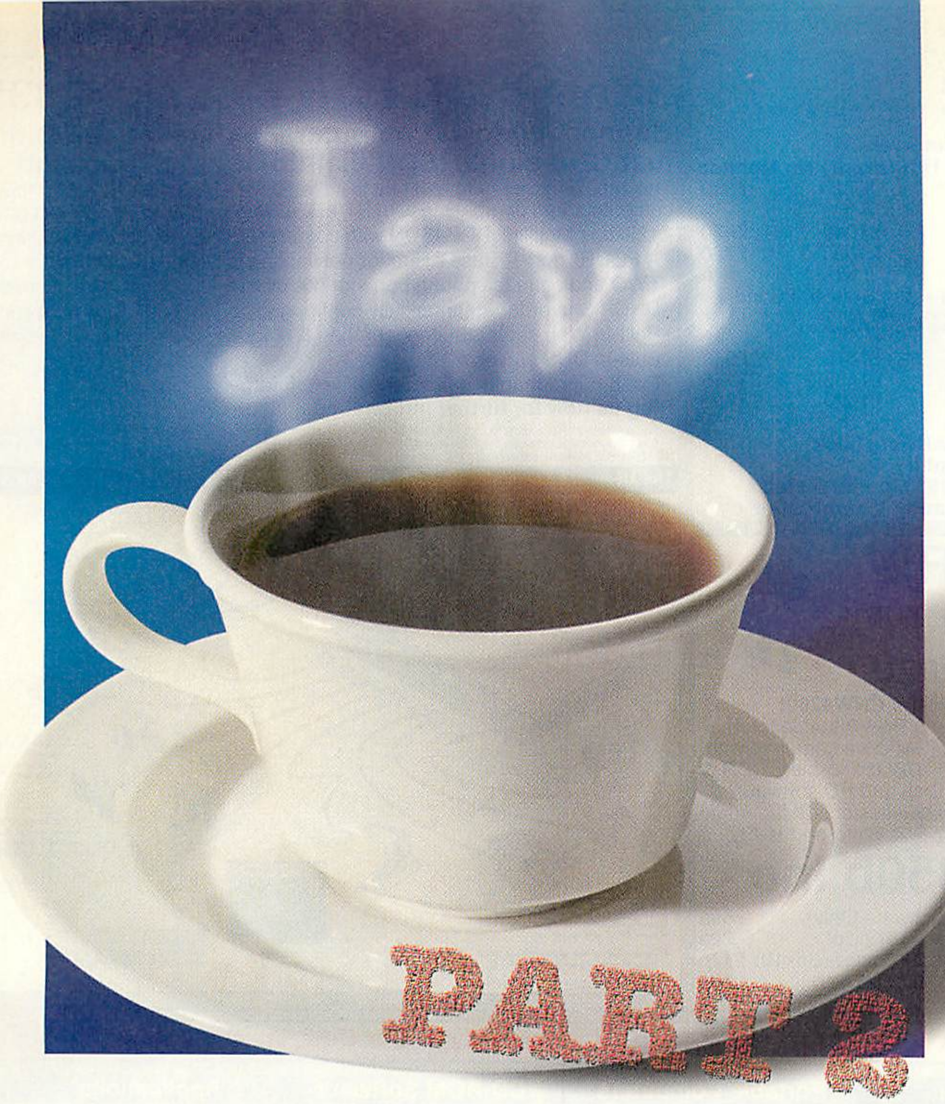
```
label1 = new Label();
```

we would simply be creating a blank label **label1**, the text of which could be set later. Note that you can only allocate memory to an object once, but you can change its contents many times.

Having defined each of our three objects, we want to add them to the applet's display in our web page, and for this we use the **add()** method. This method simply takes the object as an argument and adds it to the page; we will see how to control the layout used in later articles, but for now Java will automatically take care of where the objects are placed.

Simple event handling

Having created our objects on the page, we want to be able to react to them: in this case, we want a click on the button to



put some text into the text field, and for this we need to be able to detect a button click. Actions of this type are handled by the **action()** method, which should be set up as shown to take two arguments, an object of class **Event** and a further argument, whose class is left unspecified as different event types will pass different objects via this argument (the **Object** keyword indicates that this object's class is unspecified).

We can determine the target of the action – in other words the object generating the event – by looking at the value of **e.target**. This is an example of the object orientation in Java: **e.target** means the object **target** within the event object **e**. When we come to define multiple classes, this way of accessing the objects in a class will be important, but for now it's enough to say that to access the method **method()** in object **object** you use **object.method()**, and to access the variable **var** in object **object** you use **object.var**. So, to access the **target** object in the event **e** passed to **action()**, we use **e.target**.

If we wanted to specify the full names of our program's methods they would be **Ex01.init()** and **Ex01.action()**, and the three fields would be **Ex01.label1**, **Ex01.text1** and **Ex01.button1**, because all of these methods and fields are part of the **Ex01** class. However, because our entire program is inside the **Ex01** class definition we do not need to include the **Ex01** part: if you don't explicitly put the class name before a method or field name the current class is assumed, so for example the **add()** methods in our program are automatically applied to the display for **Ex01**.

As mentioned above, the **Event** class has a built-in variable **target** that refers to the value of the object involved in the event, and we can test this value, given by **e.target**, against our button **button1** with the **if** construct. Note that in Java, as in C, we use a double equals sign when testing for equality, and if the target object is indeed our button we want to set the text in our text field to thank the user.

```
import java.applet.Applet;
import java.awt.*;

public class Ex01 extends Applet {

  Label label1;
  TextField text1;
  Button button1;

  public void init() {
    label1 = new Label("Text field:");
    add(label1);
    text1 = new TextField(10);
    add(text1);
    button1 = new Button("Click here");
    add(button1);
  }

  public boolean action(Event e, Object arg) {
    Object target = e.target;
    if (target == button1) {
      text1.setText("Thank you");
      return true;
    }
    return false;
  }

}
```

Example file Ex01/java as displayed in *Zap*'s Java mode

Here we see another example of object usage: because **text1** is a text field and the **TextField** class contains a method **setText()** to set the text, we set the text by calling **text1**'s **setText()** method, in other words **text1.setText()**. It takes a while to get your head around this syntax, but consider what would happen if we left out the **text1** part: how would Java know whether we wanted set the text for the text field, the button or the label? It wouldn't, so we must be explicit.

Finally the **action()** method must return true if it has been sucessful, or false if we haven't dealt with the reported action, and the **return** keyword takes care of this. We'll talk more about event handling next time.

Text areas

There are a number of components you can add to your applet in the same way that you can add labels, buttons and text fields. On the disc the examples *Ex02/java*, *Ex03/java* and *Ex04/java* show basic text field, label and button definitions (the latter including an event handler), and if you take a look at how each of the definitions is done, you'll notice how similar they are: there's the object declaration, the memory allocation with **new**, and the placement on the applet's display with **add()**.

Most objects act in the same way, and one of these is the text area. Take a look at the example *Ex05/java* on the disc, which defines a simple text area along with a button. The text area constructor can take three arguments – the initial text, the number of rows and the number of columns – and provides us with a method, **insertText()**, that allows us to insert text into the area. All we do in the program is to define a text area in the normal way, and react to a click on the button by inserting some text at the start of the area.

Notice how Java automatically provides us with scroll bars, a caret (try clicking in the text area) and keyboard handling (try typing into the area). This is one of the powerful aspects of Java: where in BASIC you would need to spend ages defining a scrolling text area, in Java everything is provided automatically.

Next month

Now that we know how to create and display window components, next month we can cover lots of ground and learn about radio boxes, check boxes, scroll bars and so on. In the meantime check out the HTML file on the cover disc which contains a summary of what we have covered so far, as well as further information. AU

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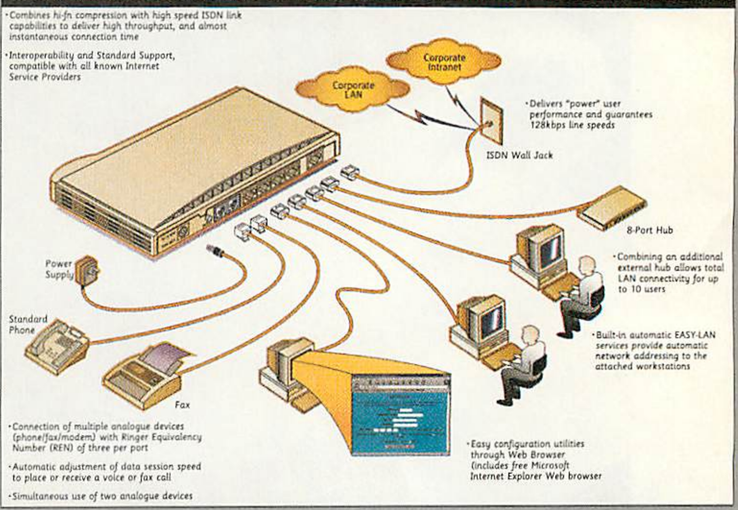
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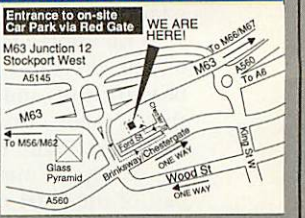
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Speakers corner

Rob Miller checks out another selection of sound systems

In the August 1998 issue I looked at three different ranges of speakers designed for use with a multimedia-capable computer such as the Archimedes. Models from Yamaha, Labtec and Cambridge Soundworks all got a look in with the Yamahas coming out on top. Six months down the line, I've decided to see what else is on other and, if is the case, what's changed in the world of computer speaker technology.

All Acorn have sound output as a built-in feature. There's none of the fuss of trying to make sure you have the right drivers, or that your sound card will work with a given piece of software, which you get with a PC. If the software produces any kind of noise, be it music or sound effects, an Acorn will just play them. Plain and simple.

The only minor disadvantage with having a built-in sound system means that you have to make do with what you're given in the first place. There are, of course, sound cards such as Expressive Software Projects' Minnie card, but that's just really a device to enable the 16-bit sound already present in the Risc PC 600 range. Perhaps the best way of enhancing what is already a good sound system is to add a purpose-made set of multimedia speakers, preferably with the addition of a sub-woofer to extend the bass range.

This time round I've selected five different series of speaker system, namely Aiwa, Altec, Bose, Roland and Sony. Both the Altec and Aiwa systems reviewed here come with sub-woofers, while the Bose and Sony speakers can be boosted by an additional sub-woofer unit.

Bose MediaMate

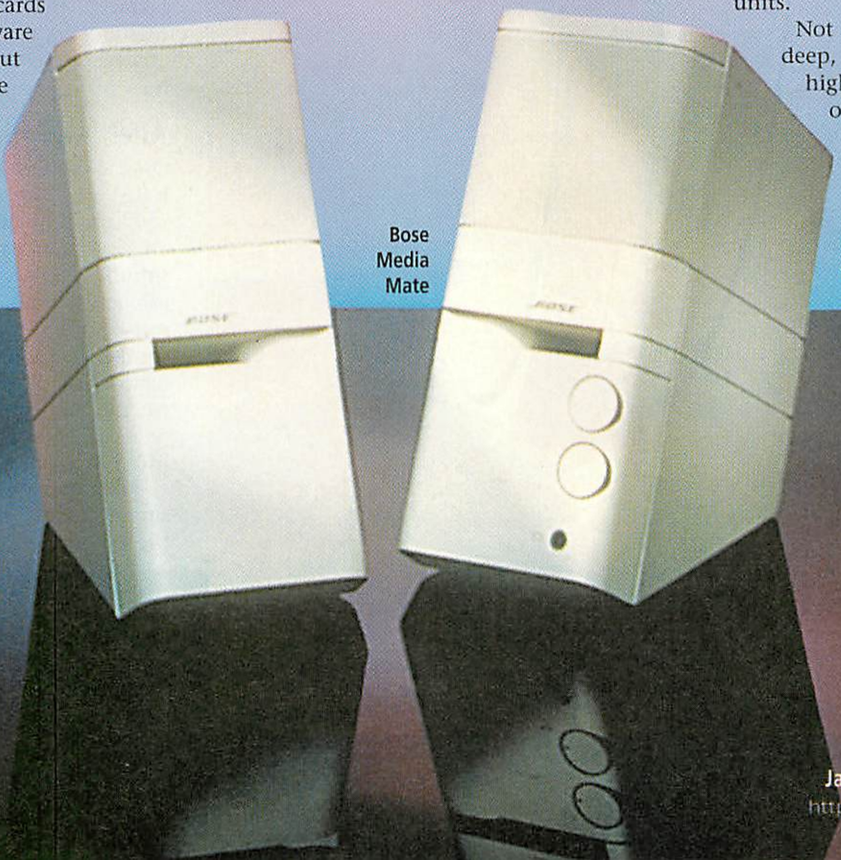
If you have more than a passing interest in hi-fi equipment you'll no doubt have heard of Bose. The company is well known for it's high-end audio products, and especially its speakers. As well as those for home use, Bose build a lot of speakers for retail units; not to sell in them, but to play in them, in shops, restaurants and so on.

This might lead you think that they're only good for background muzak, but in fact it means that Bose have become experts at getting the best sound out of the smallest unit, which is perfect when it comes to multimedia. Bose's MediaMates are a prime example.

Like the rest of Bose's products, the MediaMates have an elegant, if understated design, designed to fit in with any environment. Like all the speakers on test here, they're supplied in the rather bland light grey that is so popular with computer peripheral manufacturers. Anyway, it's not what they look like really that counts but how they sound.

For such small units – they were the smallest speakers on test if you take into account that they don't come with a sub-woofer – the sound they produce is nothing short of unbelievable. That may sound like a bit of an exaggeration but it's hard to see (hear?) quite how they've managed to squeeze such a wide response range out of such small units.

Not only do they produce deep, undistorted bass and high, clear treble, but the overall size of the sound stage is very impressive to boot. With each speaker sitting close to either side of your monitor, the sound fills the space around you



Bose Media Mate

making you feel like you're right in the middle of it. Probably the best analogy I can think of is that it's like sitting between a pair of headphones, which is particularly good for games such as Doom.

Sony SRS – PC71

The Sony SRS-PC71 were by far the strangest looking of all the speakers on test, even more so than the curvy Aiwa TS-CD15 system. Supplied in the usual computer-grey, the speakers are each comprised of an elongated bass speaker, plus a small tweeter. One of the units houses the controls which are all mounted on the front for easy access.

I was quite surprised by the lightweight feel of the units as they have a rather plastic-like quality that you wouldn't normally associate with Sony. Added to this, the controls were a little on the stiff side although that could be because they were new. This was most apparent when trying to change the volume or tone which meant having to physically hold the speaker down if it was free standing.

Soundwise the speakers were pretty average as well although the addition of an optional sub-woofer might have helped. I found that the speakers weren't really capable of playing anything loud, which I guess won't be everyone's requirement, but is essential if you want them for games. It seems that Sony have made looks a priority over sound quality which isn't exactly the right thing for a speaker system.



Aiwa TS-CD15

Aiwa TS-CD15

The Aiwa TS-CD15 system comprises three parts, the two treble speakers and a single sub-woofer unit. The design is I guess what you'd call 'ergonomic'; very curved and rounded, which makes a nice change from all the usual sharp corners. The sub-woofer in particular is a strange beast and resembles a bread bin with knobs on.

Setting the speakers up is easy with a single connection from the computer to the subwoofer with the two treble speakers plugged into that. Spring-loaded clamps (like those used in hi-fi speakers) are used to join the speaker wire to the sub-woofer rather than plugs and sockets, reducing the risk of degrading the sound with a bad connection.

Unless you have acres of desk space, you'll more than likely want to position the speakers near your monitor. Of course this is fine, given their small size, but it's also possible to have them a good few metres apart due the exceptionally long wires that they're supplied with. If you do want them close to your monitor, it does mean that there's a lot of loose cable but you can always tie it up, or even trim it, if you're sure you won't want to move them later on.

Out of all the speakers, the TS-CD15s seemed the most lightweight when it came to their construction although I was pleasantly surprised to hear that this wasn't reflected in the sound they produced. With high frequency sounds (for example, the sound of running water), the output was clear and bright. Likewise, the sub-woofer was capable of reproducing the bottom end in virtually any piece of bass-heavy audio thrown at it.



Sony SRS-PC71

Altec ACS45 & ACS48

One of the first things to strike me when I first saw the Altec speakers was their solid build quality. I'm sure some of you are saying, 'yeah, but what about the sound?' OK, sound is important (obviously), but you're not going to get a solid sound unless you have a solid speaker to produce it. The other striking feature of the Altecs was their sheer weight. Both systems turned up packed in one box which was almost too heavy to lift.

Both models of Altec speaker come supplied with a sub-woofer to enhance the bass range of the sound output. In

Comparison Table

	Looks	Music	Game	Practicality	Overall
Aiwa TS-CD15	7	8	7	8	30
Altec ACS48/ACS45	8	10	10	7	35
Bose MediaMate	9	10	9	9	37
Roland MA-8	7	9	8	8	32
Sony SRS – PC71	10	7	7	8	32

both cases the sub-woofer is a large and somewhat cumbersome unit which is designed to sit on the floor near your computer, possibly under your desk. The units are in fact so large that I found myself using them as footstools.

The relatively short cable supplied that sits between the computer and the sub-woofer unit does restrict where the sub-woofer can be placed in relation to the computer, although it would be fine to substitute a longer wire so that you can position the sub-woofer more out of the way.

Both Altec systems are powered through a single 13-amp plug, unlike the Yamaha speakers I reviewed last time which required two power sources to function. Plugging in the speakers was a straightforward enough process to the absence of an on/off switch was a bit disconcerting at first. Fortunately those kind people at Altec saw fit to include a note in the documentation to tell the user how to turn the units on. Simultaneously pressing the volume up and down buttons does the deed and neatly brings all controls to hand.

So, how do they sound? Well, the sound is clear and well defined but to be honest, I couldn't really hear what, if anything, the sub-woofers were doing. That was until I cranked the volume up and fed the speakers some bass-heavy sounds, at which point they – how should I put it? – Kicked posterior! Some speakers that have an 'alleged' bass response just sound continuously 'muddy' with no real definition. The sub-woofers in both Altec systems however, just produce bass notes when they're required. Likewise, the treble response is also excellent with the full range of frequencies being reproduced clearly.

Roland MA-8

The Roland MA-8s are a couple of medium-sized monitor speakers supplied on their own, without a sub-woofer, though that's not to say that they're incapable of producing low-end frequencies. Being old hands in the professional audio market, Roland know a thing or two about speakers and the MA-8s look just like two little practise amps albeit in computer-grey cabinets.

They're quite heavy and bulky, due to the large woofers (the bass drivers) in each unit, which is fine if you have quite a lot of space, but could be a problem othereise. Their shape and weight does have one advantage though as they can function as a pair of bookends as well as producing sound. More seriously though, their solid build quality means that they can be cranked right up and still sound excellent.

If you're familiar with Roland equipment, you'll know doubt have heard of the Roland 'sound'. It's difficult to pinpoint exactly, but all the things that Roland make produce a good, solid noise when you plug them in. It's a bit like the sound that gets attributed to different car manufacturers, only more musical.

Out of all the things I tried playing through the MA-8s, music (and in particular, techno music) came out sounding the best, which probably has a lot to do with Roland's musical equipment pedigree. Sound effects from games were clear as would be expected, with clarity and definition at both ends of the frequency range. Perhaps the only drawback with this system is that they're ideally suited to a environment where they can be turned up *really loud.*



Roland MA-8

The future...

Like all areas of the computer market, audio manufacturers are always coming up with ideas and innovations to keep the user interested and there are plenty of new products such as DVD (Digital Versatile Disc), surround sound and digital speaker technology to do just that. Let's hope that Acorn users get the chance to sample what is undeniably an exciting time in computer audio and music.

Conclusion

For a quick roundup fo the speakers, check out the accompanying comparison table, but first, just a few words about my favourites.

If you want big noise and plenty of it, the Altec ACS48s (or ACS45s if you are on a budget) are the obvious choice. With a sub-woofer made from wood – yes, wooden computer peripherals – the system is capable of putting the average stereo system to shame. In fact, if you want, you don't have to restrict their use to a computer and they'd be quite happy being driven from a portable CD player or something else with a suitable line-out level.

If space is limited, the Bose MediaMates provide the best solution with a system capable of producing a full frequency range from a pair of small units. The build quality of the Bose speakers is also by far the best I've come across with any computer peripheral and makes a refreshing change the lightweight feel of most things today. AU

Product details

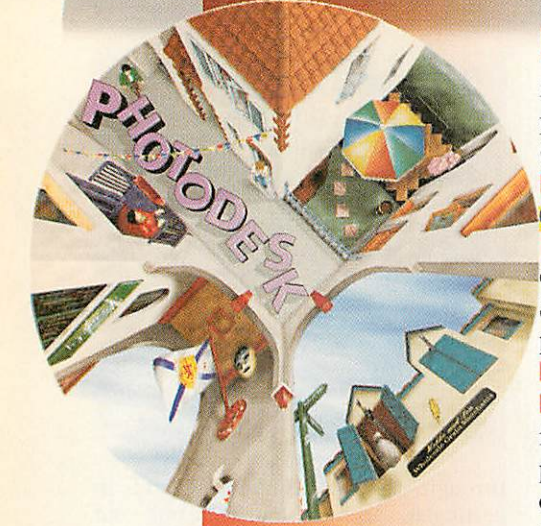
Availability: Contact your local dealer

System	*Typical price*
Aiwa TS-CD15	£60
Altec ACS45	£75
Altec ACS48	£119
Bose MediaMate	£265
Roland MA-8	£69
Sony SRS – PC71	£72

Note: Due to new legislation manufacturers with designated dealers cannot give a recommended retail price. We suggest you shop around for a good price.

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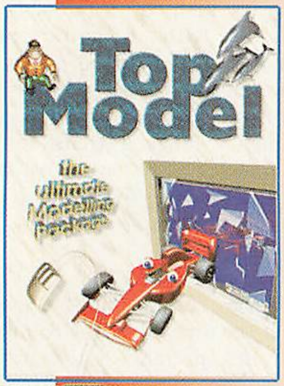
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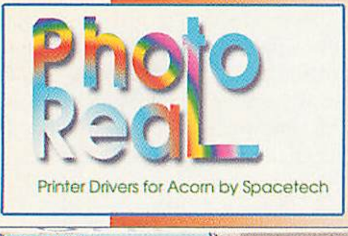


PhotoLink is an Acorn multi-driver for the most popular makes of digital camera. Cameras currently supported include the **new Olympus** range including the fantastic **C840L.** and the **C1400L SLR Zoom** Superb hard copy can be obtained via Epson or Canon **PhotoReal.** PhotoLink is available on its own at £69.00 or bundled FREE with a camera.

New Prices! C1400L £799.00 (was £1299) C840L £499.00 (was £599)

New Cameras! C1400XL High speed megapixel SLR £999.99

C900ZOOM Zoom megapixel compact with Optical AND Digital zoom £649.99



PhotoReal is the Acorn driver extension for the **Canon BJC4300, Canon BJC4650, Epson Photo, Photo700 and EX** printers with photo-realistic capability. PhotoReal makes use of the same advanced techniques for producing high-quality four colour separations as Photodesk and comes ready calibrated for the special dye-based inks used for photo-realistic printing. A calibration application is also supplied to allow you to tailor the results to your own specification **Driver only £69.00 Inc.VAT. or FREE if purchased with printer! examples: Stylus Photo700 £249.50. Canon BJC4300 £149.95 BJC4650 A3 £299.99. Epson PhotoEX A3 £454.73 (all prices inc VAT and Driver)**



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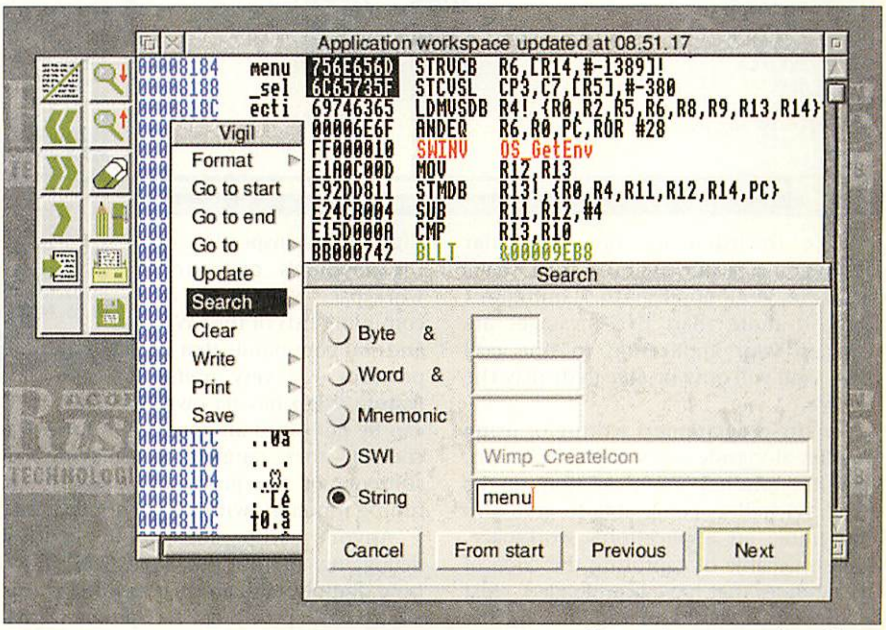
Steve Mumford investigates a program monitoring utility from ProAction

As any erstwhile programmer will know, designing an application and putting the first draft of the code together is only half the battle – the testing phase is just as important and unless you've had a particularly good day, your program's likely to have the odd quirk. If you need some help in picking up the pieces, you might be interested to read about *Vigil*, now being marketed by ProAction under the auspices of R-Comp Interactive.

Vigil is supplied on floppy disc and installs easily. The program itself has two main modes of operation; it can be used to analyse and disassemble existing applications, and it also provides a number of SWI calls that can be woven into your code to construct a debug-enabled version of a program. *Vigil* is happy working with anything from BASIC to absolute code, the only proviso being that the subject must be a multitasking application.

Before you can make use of its monitoring features, you must register the chosen application with Vigil so that it knows which WIMP conversations it's allowed to listen in on. The easiest method is to drag an application to the Vigil icon; your program is then started automatically and the main status window appears. This window allows you to access the majority of Vigil's functions from one location, and as well as displaying standard information such as task name, handle and slot size, it also allows you to open separate windows that display workspace dumps, WIMP message logs and variable assignments (for BASIC programs).

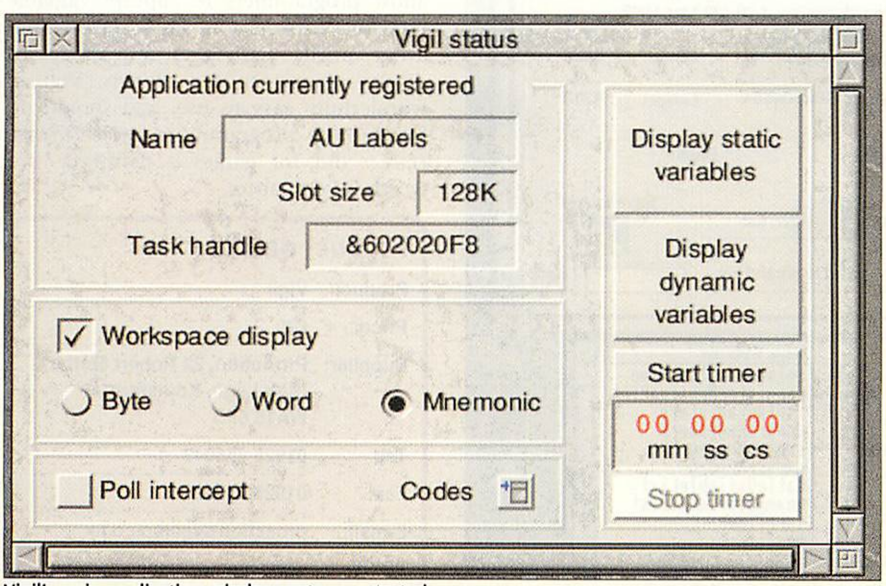
The workspace display window allows a programmer to examine and edit the contents of an application's workspace whilst the program is still running. It's a particularly useful feature, allowing the user to examine code structure at the grass roots level or modify values held in data blocks. The display isn't truly dynamic, and has to be updated to reflect any changes in the target application – however, it's possible to set up an automated update that will trigger repeatedly, waiting for a given number of seconds between each update. This has some strange effects on my system – at the time of capture, the Vigil menu pops up at the bottom left corner of the screen, and any dialogue boxes that were open are forced to close.



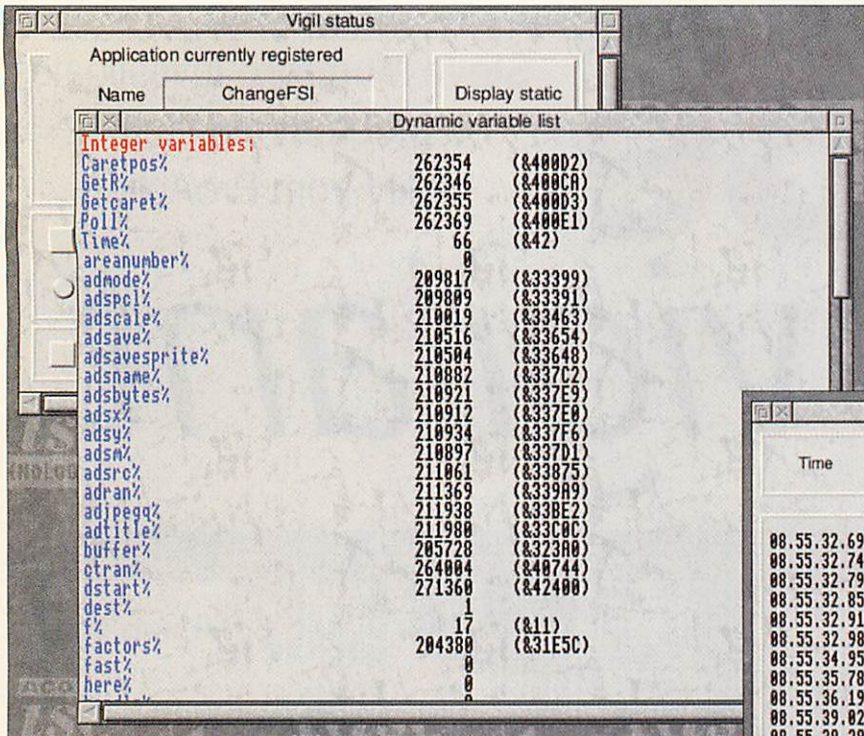
You can locate any string of bytes

One of the hardest areas of WIMP programming to get right is interprocess communication, in that as well as dealing with your own code, you have to accommodate other people's. RISC OS goes out of its way to provide a standard method of communication, but for complex procedures such as direct RAM transfer, it's easy to lose track of the conversation. Vigil provides a way of listening to the WIMP messages that are being sent to your application, so although it's only possible to see one side of the story, you can get a good idea of the demands being made by the WIMP.

When a message is received, it's displayed with reason and action codes, as well as a timestamp. The list of displayed messages can be filtered so it's

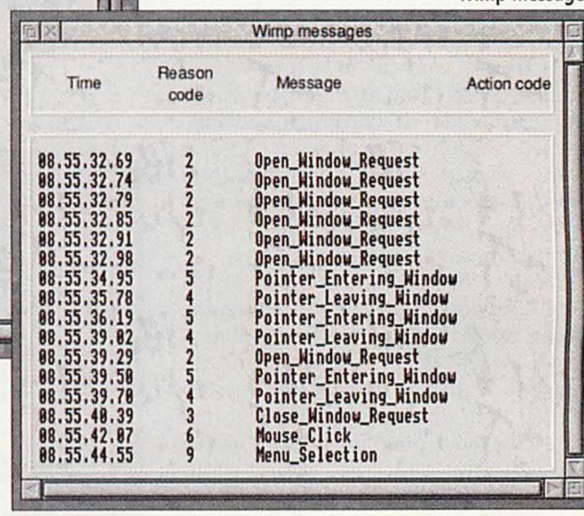


Vigil's main application window gets you started



Being able to view variables is very useful...

...and you can keep track of wimp messages

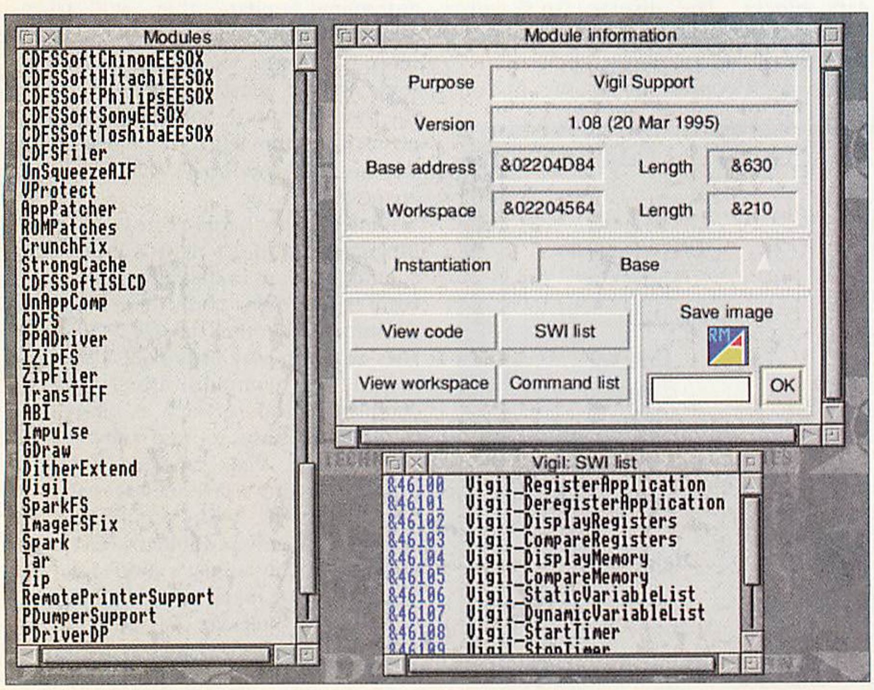


possible to listen for one particular message, a selection or every one that's passed to your application. Limitations apply; if more than five messages are given to your application in one poll cycle, Vigil will only be able to display the last five.

For any programmers writing or using modules alongside a desktop application, Vigil has another useful section up its sleeve. As well as being able to grab and disassemble an application's workspace, it's also capable of capturing the code of any modules that have been loaded – just open the *Modules* menu and click on the one you're interested in. Once selected, Vigil allows inspection of the module's code and workspace, as well as compiling lists of the SWIs and star commands that it provides – a very useful feature. Vigil has its own SWI calls that can be built into an application for extra control – these range from displaying the contents of the processor's registers to timing functions within your application.

Anyone who has used Acorn's debugging application, *DDT*, will know how tedious it can be; although the ability to step through a C program line by line can be a wondrous asset if you need ultimate control, its vast bulk can quickly weigh the user down. Vigil's main advantage is that because it 'eavesdrops' on a chosen application rather than acting as an interpreter, it's much easier to use and the subject program can behave normally – Vigil simply looks over its shoulder every WimpPoll cycle.

The downside to this is that the snapshots presented to you can be quite granular; if all hell breaks loose during one polling cycle, you'll only see the remains next time Vigil gets polled. Having said that, its bank of SWIs allow programmers to capture valuable bits of information and store them away until Vigil gets a chance to display them. On top of this, Vigil is wonderfully easy to use, and should do for desktop programming what *Desktop Hacker* did for games – definitely worth investigating. AU



With Vigil you can also check on SWIs

Product details

Product:	Vigil
Price:	£20
Supplier:	ProAction, 22 Robert Moffat, High Legh, Knutsford, WA16 6PS
Tel:	01925 755043
Fax:	01925 757377
E-mail:	proaction@rcomp.co.uk
WWW:	www.rcomp.co.uk

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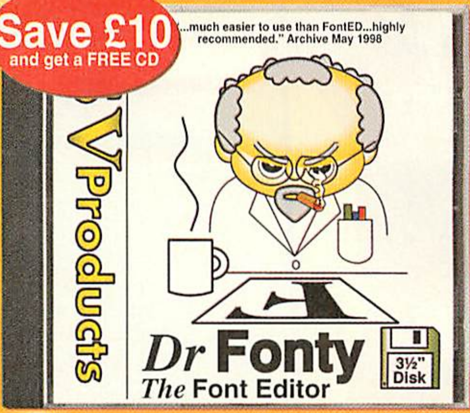
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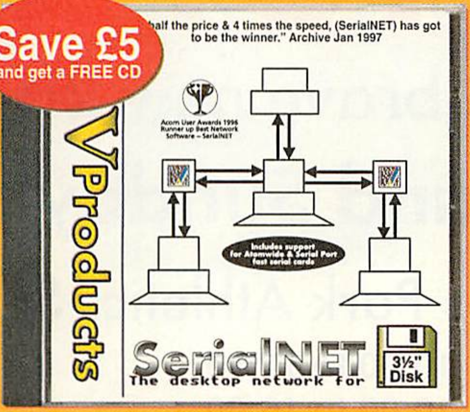
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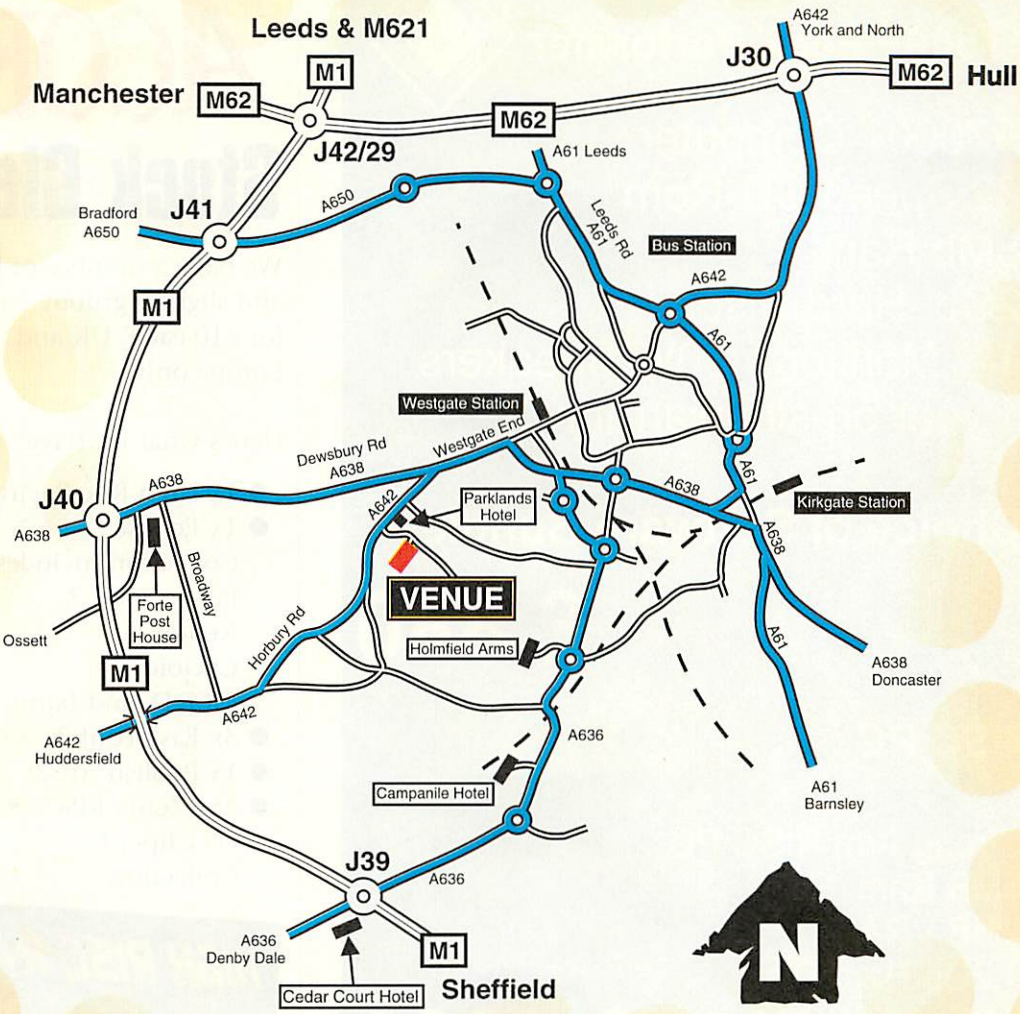
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The *shapely* type

Stephen Scott investigates the latest font collection from ISV, and is left drooling...

Macintosh and PC users have no idea how lucky we are when it comes to fonts. With arguably the best font display system available in the world, Acorn users can produce design work, knowing that what they see on screen gives a very good idea of what they will get on paper.

Under RISC OS, fonts are stored as simple lines and curves, which are padded out with pixels when required for display on screen. In effect, the font is built 'on the fly', whereas on other platforms, fonts are displayed in the form of simple bitmaps, seriously compromising readability in the process.

The latest NDT font collection, *Professional Typography Expert 2100*, must represent the best value fonts collection from ISV, perhaps even on the Acorn platform. Over 2000 fonts, plus a variety of software to help you use them to the best of your advantage.

The product is nicely presented in the usual ISV jewel case, containing one CD-ROM. How this disc is used is up to you, for fonts can be used directly from it, or selected fonts installed on your computer.

Your machine must be installed with RISC OS 3.1 or later, and version 3.07 or later of the Font Manager. The CD's documentation, as with every ISV product, is disc-based, using their manual software.

Running the main program displays an attractive, yellow canvassed menu presenting four options; catalogue printing, font viewing, font installing, and direct use from disc. The latter option calls up a further menu displaying the categories of font available, such as Uncials, Script, San Serif and so on. When run the first time, this appears on the left of the desktop, just above the icon bar. Click on a font type to select it, and its contents become available to any program running at the time. Click again to deselect a group, and the reverse effect occurs.

Of course, having the CD in the drive is not always desirable, so selected fonts can be installed into either the *!Fonts* directory, or into other font managers such as *EasyFont*, and *Font Manager*. The catalogue viewer displays sample text in any font selected, so you can see at a glance whether it is suitable for your needs.

There are many font families to choose from, and the display quality is truly exceptional. ISV's fonts appear solid and well defined, even at the smallest sizes. The font families themselves contain well known designs, such as Frutiger, and even revised versions of the standard RISC OS fonts Homerton and Trinity.

The disc includes a variety of other software for the preparation, building and tinkering of fonts, which were previously available separately. *Font Designer's Toolkit* comprises four applications, plus a glossary of typographical terms.

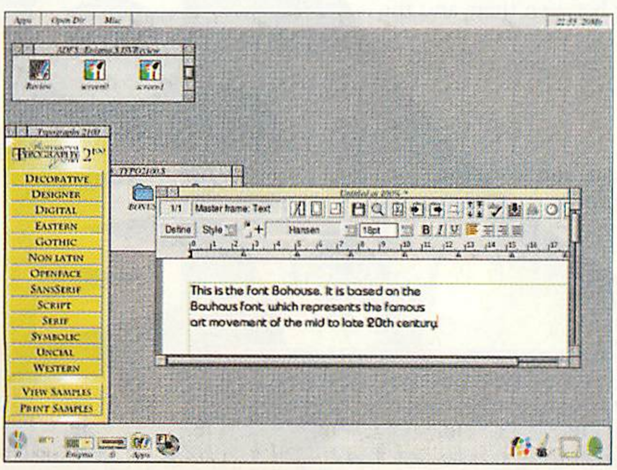
FontTrix Pro allows you to build various weights of any typeface, if you have an incomplete family. *FontEd* is a StrongARM compatible version of Acorn's very capable font editor and designer. *FontKern* allows the editing of kerning data (the values which determine spacing between characters), and *ISVMetric* enables you to edit the IntMetrics files within font directories. Some of this software is highly specialised and is more suited to professionals than the enthusiast.

There is even a program which suggests particular font combinations, to save you time otherwise spent scanning through the entire disc looking for that perfect match. Lastly, a program to match RISC OS font names to the more widely known Postscript equivalents is included, which is extremely helpful for when you are sending work to non-Acorn savvy printers. All the programs are copiously documented with their own online manuals, situated in the same directory as the program itself. These manuals can print out or output their content in text format, for import into other programs.

The font system is totally transparent in use both off, and on disc. The only program that appeared to fall over was *Impression Publisher*. Upon opening, the error message 'Buffer overflow' appeared, forcing Publisher to quit. The only way I could fix it was to reset the machine, and run Impression *first*, before running Typography. Apart from that incident, the system appears to work in all major DTP and artwork programs.

It is a good idea if you have the space, to install your favourite fonts to hard disc, as the accessing speed from disc can be quite slow, depending on how fast your drive is. In my case, a double speed drive, update times were very slow.

The presentation of the software and resources is impeccable; the package oozes quality, and the standard of typographical design is very high. Typography 2100 is an absolute must for anybody remotely interested in design and desktop publishing, and offers truly excellent value for money. AU



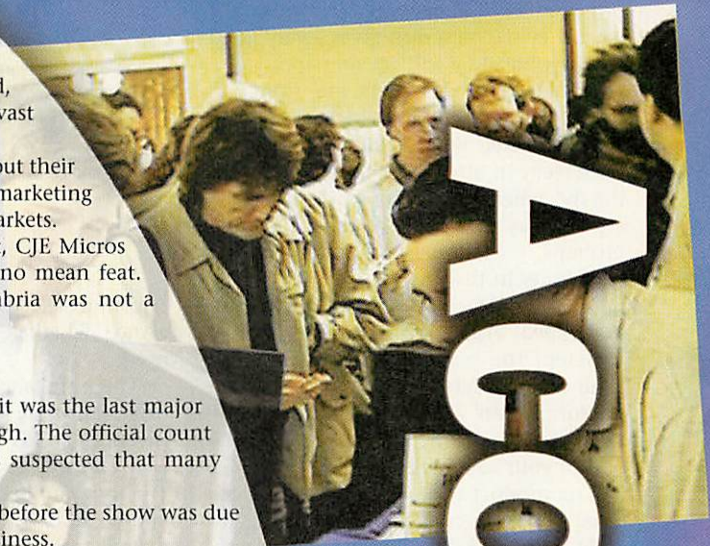
Accessing fonts directly from CD

Product details

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Address:	86 Turnberry, Home Farm, Bracknell, Berkshire, RG12 8ZH
Tel:	01344 455769
Web:	http://members.aol.com/isvproduct/

Acorn Shows

Stephen Scott reports on previous Acorn shows, and reveals details of forthcoming events



Scottish Acorn Show – November 8, 1998

Taking place in early November, the Glasgow-based show was the first major event after the cancellation of Acorn World. The turnout was good, considering the geographical location of the show to the vast majority of Acorn users.

Castle Technology were on hand to tell dealers and visitors about their role as official distributor for Acorn products, and his future marketing plans for the platform, in selling to previously untouched niche markets.

Most of the major exhibitors took the trouble to attend the event, CJE Micros arguably having the furthest to travel – Glasgow to West Sussex is no mean feat. Heading back through the remnants of Hurricane Mitch over Cumbria was not a pleasant experience for some exhibitors.

Acorn Midlands Show – November 28, 1998

Owing to its centralised location near Birmingham, and the fact that it was the last major Acorn show before Christmas, turnout for this show was extremely high. The official count was 652, according to John Stonier, the show's organiser, but it was suspected that many sneaked in.

Indeed, there was a steady influx of visitors until at least two hours before the show was due to close. As a result, most, if not all, exhibitors reported very good business.

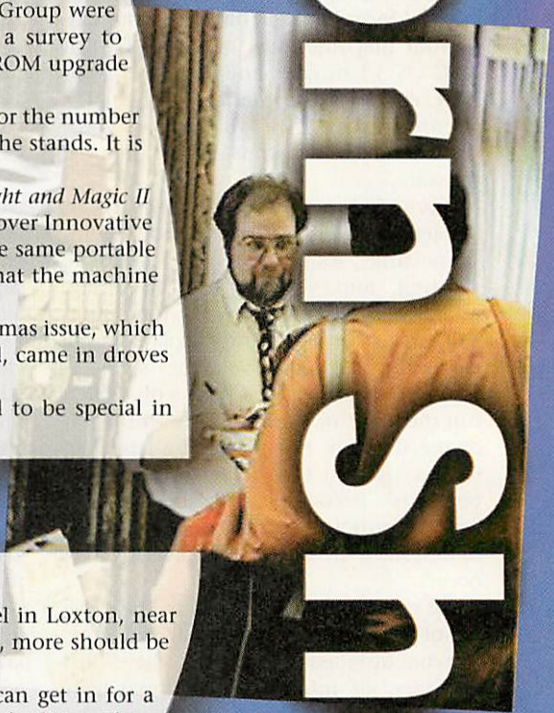
The show marked the end of over two months of perpetual limbo in the Acorn market, with a press release from Andy Mee of Acorn, stating that negotiations with the Steering Group were back on track, but nothing more was revealed. CJE Micros, however, distributed a survey to exhibitors and visitors about the possibility of RISC OS 4 being made available as a ROM upgrade to existing StrongARM Risc PC and A7000+ owners.

It was argued that the venue, the National Motorcycle Museum, was far too small for the number of visitors that arrived. As a result, people had difficulty actually getting to some of the stands. It is rumoured, however, that the venue will be changed for next year.

R-Comp were demonstrating their latest conversions of *Descent* and *Heroes of Might and Magic II* to the masses, as well as selling copies of *Doom* and *Syndicate*. Interconnex, who took over Innovative Media Solutions just days before the show, were showing off the Peanut portable, the same portable that was shown at the Wakefield exhibition last May. It was announced, however, that the machine was still being developed, and would be available in February or March 1999.

Acorn User were there, selling back issues and limited copies of the then new Christmas issue, which sold out by lunchtime. However, visitors who normally resubscribed at Acorn World, came in droves to resume their subscriptions.

Apart from the quality of the venue, the show was a great success, and proved to be special in breaking the silence over the future of RISC OS.





Acorn Southwest Show – February 20, 1999

The next event in the Acorn calendar will be taking place at The Webbington Hotel in Loxton, near Axbridge, North Somerset, from 10am till 4.30pm. By the time this show takes place, more should be known about how the Acorn platform will progress into the next century.

Admission prices are £2 for adults, while ARM Club and Acorn Clan members can get in for a pound. Accompanied under 16s are free. Refreshments will be available in the hotel facilities. The venue is situated nine miles from Junction 22 of the M5, and 25 minutes from Bristol Airport. The nearest rail station is Weston Super Mare; a shuttle bus will be operating between there and the venue.

Full details of the show can be found on the Internet at *http://www.argonet.co.uk/acornshow/*, or on e-mail at *acornshow@argonet.co.uk*.

Wakefield Show – 15th/16th May, 1999

As of now, the Wakefield venue is the largest event in the Acorn calendar, and a lot is promised for this show. The above dates have just been confirmed, and will be taking place, again at Thornes Park Athletics Stadium.

Check out the advert on pages 42 and 43 for more details.



If you have any events planned in the future, and would like them mentioned in subsequent issues of Acorn User, contact Stephen Scott by e-mail at shows@acornuser.com.

Correctly addressed

Steve Turnbull checks out a valuable business tool

According to research by the Royal Mail one of the most annoying and off-putting things that can happen when receiving mail is for the envelope to be incorrectly addressed. So if you want to make the best impression you have to have the right address on the envelope and letter.

Royal Mail have, for many years, had a database they call PAF® which is their Postcode Address File which allows you to cross-reference every address and postcode in the UK. *!AddressIt* from Fabis uses a subset of that truly enormous database available on RISC OS, so that you can ensure that your letters are correctly addressed, and first impressions can be good.

A postcode does not represent one location, instead it represents an area which will normally include a group of residencies up to about 100 houses – given just the postcode and the house number a letter should reach the right destination. Businesses may or may not have a unique postcode, it depends on how much post they get.

The subset that *!AddressIt* deals with takes you down to the postcode level – not the individual residence. So given a sufficient partial address (including the house number) you can get the full address and the postcode, and given the postcode and number you can get the full address.

The package you get is quite slim, a simple book-style folder, a CD and a 20-page manual. Installation is simple, put in the CD and run the install program from it. Enter your details, whether you want the full installation (120Mb – recommended for slow CD drives) or the less hungry minimum install of only about 240K.

Iconbar menu provides the usual Info and Quit options plus four more: Enquiry, Browse PAF, Formats and Prefs – personally I would have preferred Choices to Prefs as it's more standard in RISC OS, and the three dots '...' that indicate a dialogue box have been omitted but I'm being picky.

Making enquiries

The Enquiry dialogue allows you to query the PAF to test whether a specific part of an address is valid. For example you could enter Wilmington in the Post Town field, click on its ? icon and get a list of all post towns scrolled to the nearest match for the item you've named.

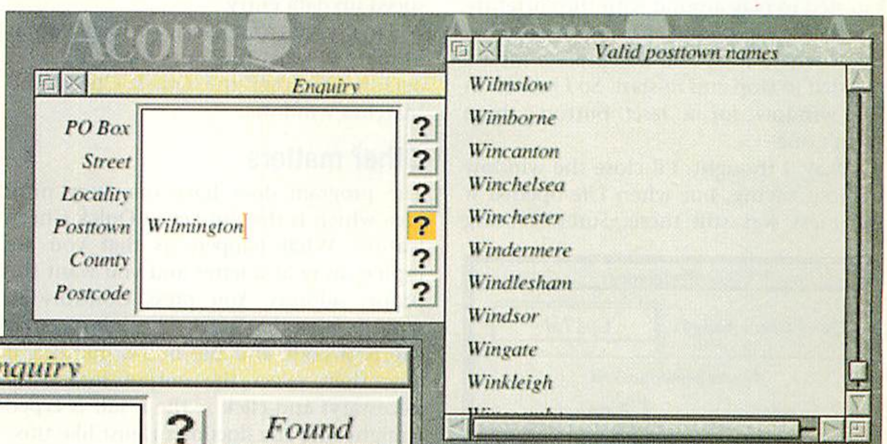
As it happens there is no Wilmington post town and the nearest we get is Wilmslow, assuming you have a typing error you can click on the valid list and the entry will be written back to the enquiry window. This works for each individual field.

Clicking on *Search* however uses all the fields and attempts to match them to full addresses, the results pop-up in the "Matches from enquiry" window. It turns out that Wilmington is indeed a locality in Bath, in East Sussex, in Dartford and in Devon.

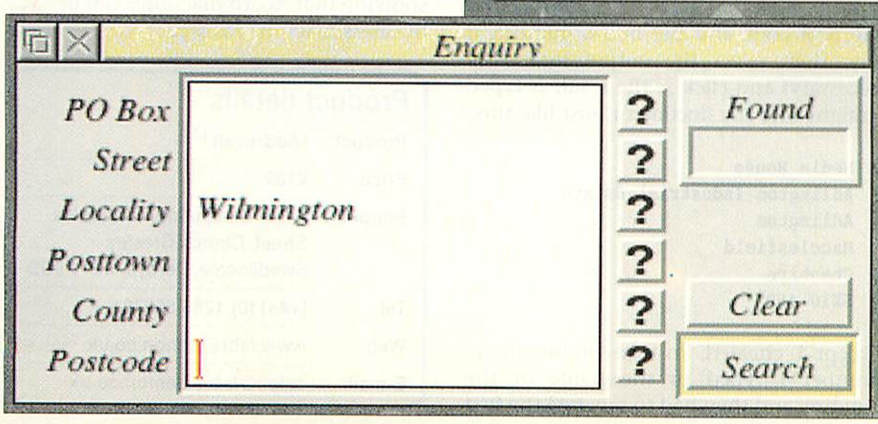
One might be concerned that pieces of addresses are missing, for example the Dartford Wilmington's do not contain a County in the address, the answer is simple – the result you get is what the post service *needs* to correctly deliver the post – anything else in the address is unnecessary. So those with lengthy addresses should bear in mind that the post man only needs a maximum of five fields to get to you, often less.

Having selected your address, and got perhaps just one or two entries you will now want to export the data, perhaps to a letter you're writing or a database, how do you do it? Simply select the address you want by clicking on it – it turns blue – then choose the output format you require (more on formats later). Now you have a choice, you can click on the disc icon and drag the data to save, or click in the document you're typing into at the place you want the address and then click on the "Output to cursor" icon, which inserts the characters of the address into the keyboard buffer and thus types it into the document.

I was a little bit surprised that I couldn't do a direct drag and drop just by dragging on the address in the window –



...yes there is a match for it as a locality...



Let's look for Wilmington...

perhaps for the next version, it's no great problem not having it but would involve fewer clicks than the "type-in" option.

Wandering mouse

The second main option, also available on the *!AddressIt* toolbar, is Browse PAF. This option is possibly for masochists bearing in mind that there are 1.6 million of entries. What you get is the entire database listed in post code order, so you can scroll up and down the list in enormous leaps with the CD trying to keep up with you.

Alternatively you can type in a partial post code (as long as it contains the initial one or two letters and a number) and the program will locate the nearest match.

The window update on the Matches window is not entirely correct and sometimes bits of old addresses are left over. This is not a great problem though perhaps could be addressed for the next version.

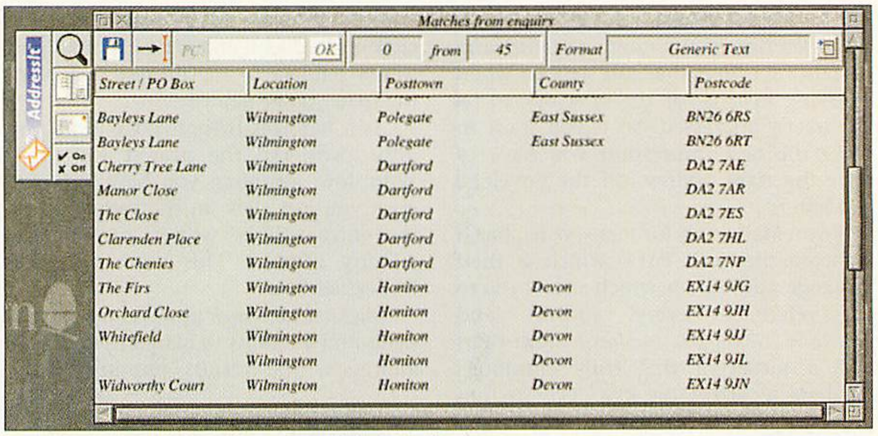
Format set-up

This section allows you to set up the format of the data to be output. Plus it allows new formats combining different fields of the PAF to be defined, as well as allowing fields to be combined on to the same line if required.

Field delimiters for the output can be defined so if the database into which you want to load the data has strange formatting requirements this system is versatile enough to cope with just about anything.

This is all very useful but it has one serious flaw which had me irritated within seconds (though it will only ever bother me that one time): I know I should have read the manual first but who does? I started to play around with the currently selected format and having reached a point where it was all a complete mess I decided to stop and re-start. So I looked in the window for a *reset* button, there wasn't one.

Okay, I thought, I'll close the window without saving, but when I re-opened it the mess was still there. Surely closing down the application and re-starting will fix it? No, it had clearly saved the mess as the new format – even though I had not clicked the *Save* button at any time. Not good.



...and here's just a few of them, from Bath to Dartford to Devon

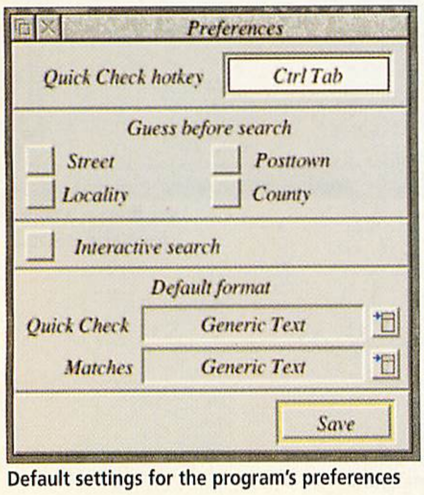
Preferences

The preferences window allows you to change the hotkey for the Quick Check pop-up window, more of which in the next section. It also allows you to modify the behaviour of the search from the Enquiry dialogue.

You can select "Guess before search" on any of the street, post town, locality or county fields and this has the effect of doing a match with the list of names first and choosing the closest match on each of the specified fields before performing the actual search.

The "Interactive search" window performs a match every time you press a key in the Enquiry dialogue, so you can see how well what you're typing is matching and click on the right item to speed up data entry.

Finally you can specify which output format will be the one that's used as default in either the Quick Check and Matches windows.



Default settings for the program's preferences

Other matters

The program does have one very nifty idea which is the hot-keyed Quick Check feature: What happens is that you are typing away at a letter and you want the proper address. You press Control+Tab and up pops the Quick Check box, enter the post code and the house number, if any, then select the output format (if necessary) and click ... the result is typed straight into the document, just like this:

```
Media House
Adlington Industrial Estate
Adlington
Macclesfield
Cheshire
SK10 4NP
```

Except I cheated, instead of the house number I typed in the name of the building and then had to separate the first two lines – but it was less arduous than entering the whole thing. And now I know what the real address ought to be – not that we're changing.

There are quite a few fairly stringent rules that apply to this software, for a start what you get is a single year's worth of usage, this is sensible because the PAF is going to need updating. Other rules include being unable to make the software or data available to any third party in *any* way. The Royal Mail themselves are very strict about the use of PAF, hence that gets passed on to the buyer.

So who would use *!AddressIt?* Obviously it's not intended for private use – though there's nothing to stop individuals buying it. However it's key use is for business to ensure that the address database is correct and useful.

The program appeared just as Tau Press began operations and for a company whose whole business is in addresses it was a welcome addition. We've been testing addresses against the database especially where, for example, the writing on competition entries hasn't been entirely clear, or has omitted the postcode completely. It has been very useful despite what I perceive as flaws in the format interface.

Along with Octopus Systems' *CallerID* it provides another weapon for the marketing arsenal that has been available to non-RISC OS machines for quite a while and adds another argument for showing that Acorn machines can be business machines as well. AU

Product details

Product:	**!AddressIt**
Price:	**£199**
Supplier:	**Fabis Computing, 48 Charles Street, Church Gresley, Swadlincote, Derbys, DE11 9QD**
Tel:	**[+44] (0) 1283 552761**
Web:	**www.fabis.demon.co.uk**
E-mail:	**sales@fabis.demon.co.uk**

HERO
of Might

Steve Mumford indulges himself with a strategic masterpiece from RCI

R-Comp Interactive have reeled out a good number of hits over the last few months, with *Abuse*, *Syndicate+* and *Descent* all delivering many hours of gripping gameplay. There's a slight change of subject material with the release of their latest conversion – instead of futuristic settings and advanced weaponry, *Heroes II* unfolds to bring you the story of the bitter struggle between two brothers, princes in a mediaeval world.

Prince Roland is the kinder of the two, whereas Archibald, the black sheep of the family, has a decidedly darker character. Their father, the good King Ironfist, has recently died and treachery has twisted the usual procedure of succession. Forced to flee the castle while Archibald crowns himself king, Roland escapes to a remote castle, and begins to plot his revenge.

Heroes II, released on the PC by New World Computing, is a blend of strategy and role-play, and the *Heroes of Might and Magic* series is a spin-off from another family of titles named *Might and Magic*. Whereas the Might and Magic range concentrated on the role-play elements of the game and presented the fantasy world to the player via a three-dimensional Doom-style walkabout interface, the Heroes saga follows the fortunes of the major characters revealed in the earlier series, and adopts an interface reminiscent of games such as Sid Meier's *Civilization*.

Installation is straightforward, although there is one fairly major catch for people whose hard drives aren't particularly large. The installer requests 85Mb of disc space before it will install the game; it's not small, by any stretch of the imagination. Coincidentally, it was about this time when I first experienced Iomega's *Click of Death*, just as I was trying to archive older material onto Zip discs. That, however, is another story.

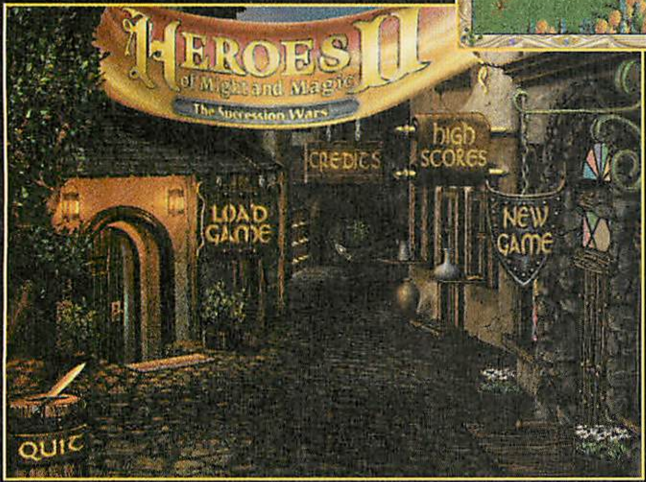
After you've agonised over which games or packages you can safely delete, it's just a matter of following the instructions – the two labelled floppy discs contain all of the Acorn-specific material, and the rest is copied and converted from the PC CD-ROM. This takes a few minutes, so boil the kettle before you start. However, once you've finished, it's possible to play the game without the CD in the drive – ideal if, like me, your CD-ROM drive isn't directly linked to the Acorn's sound system and you want to play the in-game music through a conventional CD player.

Heroes II is a turn-based strategy game, and each player has to make all of their moves before passing on control. This system brings both advantages and disadvantages; although it isn't as frenetic as games such as *Age of Empires* or *Command and Conquer*, it does mean that you can plan your domination of the world much more carefully. A turn-based approach also makes multi-player gameplay much easier to implement – more of which later.

The game's interface is easy to use and consistent – if you're wondering about the effects or status of an object, clicking on it with the right-hand mouse button will pop open an explanatory window. This works in many places throughout the game and is a particularly nice feature, helping to ease the learning curve for new players.



As its name suggests, *Heroes II* continues where its predecessor left off, and having waded through the first few pages of the manual reading about 'upgrades', 'character skills' and 'new hero types', I was a little concerned that the game might prove to be inaccessible to anyone who hadn't played the original. However, there's no need to worry as there's a descriptive introduction to the game





OES II
and Magic

specially designed for those who are new to the *Heroes* series.

The tutorial introduces you to the key aspects of the game – the Succession Wars are played out on a series of expansive square maps covering a variety of Enroth's different terrains, and when the game begins, a small patch of land around your home castle will be revealed to you. At the start of most games, you own one castle on the map and have one hero under your control, along with a pretty meagre collection of troops. The first priority is to explore the immediate vicinity for minerals or treasure to bolster the war effort – small piles of materials such as gold or ore are dotted around at the start of the game but, as you might imagine, these freebies disappear quite rapidly.

If you move your mouse over one of these hoards, the pointer changes into an icon of a rearing horse – whenever this symbol appears, it means there's an event or location on the map that you can visit or trigger. Examples are plentiful and, as well as clumps of treasure, mines full of precious materials and other resource stations, you'll find more unusual places to investigate. The windmill, for instance, provides the first visitor every week with a gift of minerals or gems, and there are all manner of temples, relics and magic fountains to pep up the strength of your party.

Of course, you're not going to get far with only one hero, and increasing the strength of your armies is vital. Each castle that you own will produce a certain number of troops per week, but this depends on the accommodation available within. Every day, assuming you have adequate supplies of the raw materials required, you can add a new location or object to each town you own. These range from new abodes to attract different creatures into your realm, to features such as wells which increase population growth. There's also the chance to fortify a castle with turrets and a moat – these prove very useful if your castle stands a chance of being marauded by nearby opponents, which brings us neatly on to the subject of combat.

Battle between two parties is a rather stylised affair, but it's very simple to learn and has distinct advantages over some of the more involved systems seen in other strategy games. The two opposing forces line up on opposite sides of the battlefield, and the commanding heroes control the battle from a safe distance. Each side then gets a chance to move one of their groups of creatures (each party can have up to five different creature types) and attack the enemy if possible. This is where you'll first encounter the great diversity of creatures available in *Heroes II* – there are six different hero classes, including Knight, Warlock and Necromancer, and each class has its own preferred selections of creatures it can raise. The Knight recruits peasants, pikemen and







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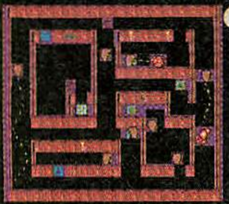
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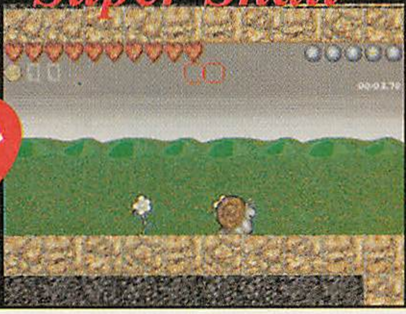
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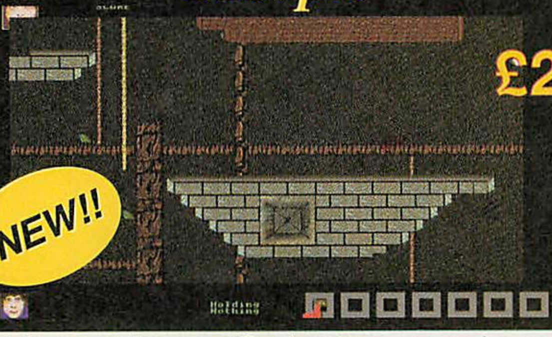
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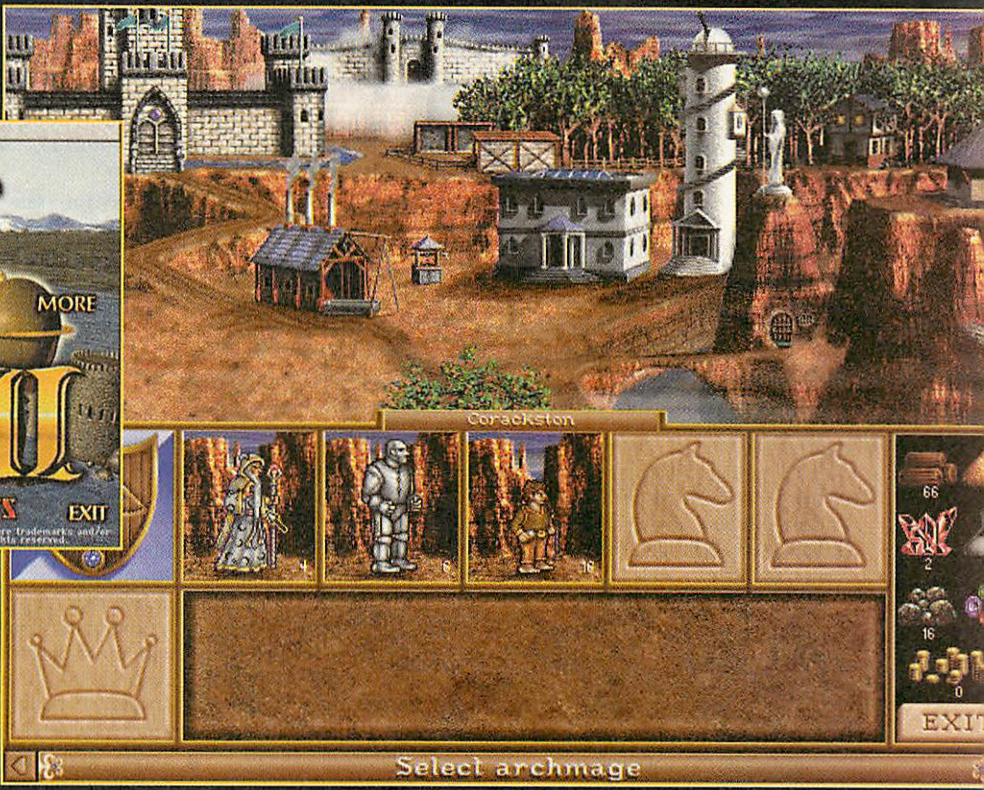


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cavalry whereas the Necromancer prefers to use the forces of the undead.

Each creature has its own method of fighting, whether it's hand-to-hand combat or missile attacks, and some of them have innate resistances as well – the Iron and Steel Golems, for instance, have limited resistance to magic. If you've invested in a spellbook for your hero and built a Mage Guild in one or more of your castles, magic spells can be cast to attempt to alter the course of the battle – these range from simple shield spells to devastating fireblasts that affect an area of the battlefield. By targeting your attacks carefully, you can neutralise the major threat of an attack before the opposition has a chance to damage the strength of your party – and the fewer new recruits you will need to bolster your numbers, the more money you have available to spend on powerful upgrades to your castles.

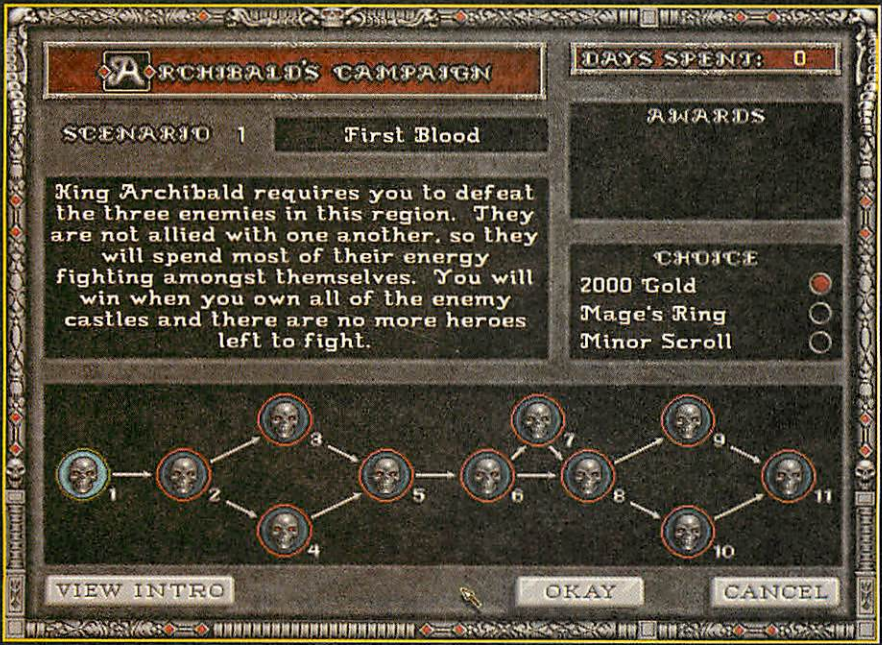
In summary

If you enjoy strategy games, *Heroes II* has plenty to offer. R-Comp Interactive have made an excellent choice in converting this title; although its name isn't as immediately recognisable as *Doom* or *Descent*, it survives the port to the Acorn almost fully intact, and the gameplay is identical to that of the PC version. The only features we've lost are the fullscreen video introductions that are used to set the scene; instead, the plot is revealed with a slideshow of images carefully taken from the film and overlaid with subtitles.

The sound is a wee bit gritty, but other than that, the conversion is faultless – they've even improved on the original by improved file cacheing and reduced disc access. Admittedly, it would have been nice to be able to play the game in a desktop window, but I'm being a bit unfair – that would really just be the little plastic figure on the icing on top of a very large, moist cake.

As seems to be becoming a characteristic trait of games released by RCI, you get very good value-for-money – as well as a solid conversion of the original game, complete with map and scenario editor, a further CD was included in the *Heroes II* box. The *Desecrated Lands* disc is full of extra levels with which to test your skills, and represents some of the best levels made available over the Internet after the game's original release.

Add to this the hotseat multiplayer capabilities of the original, allowing up to six people to sit around the machine and play against each other using exactly the same game mechanics as the single-player version, and this gives months of absorbing gameplay. Finally, the high-quality packaging and manual simply reinforce the game's professional heritage and solid conversion, making this an absolute classic and a game I'll be playing for a long time to come. AU



Product details

Product:	Heroes of Might and Magic II
Price:	£35
Supplier:	R-Comp Interactive, 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS
Tel:	(+44/0) 1925 755043
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Author: Philip Mellor

Tesselate is a program from the prolific author **Philip Mellor** that generates tesselating drawfiles. You first create the shape(s) to be tesselated using the design window – click select on the iconbar icon or choose Window -> Design from the main menu. Opening the tesselation window (adjust click on the iconbar) shows you the output. One further window, Arrangement, allows you to control the layout and spacing of the tiles in the tesselation.

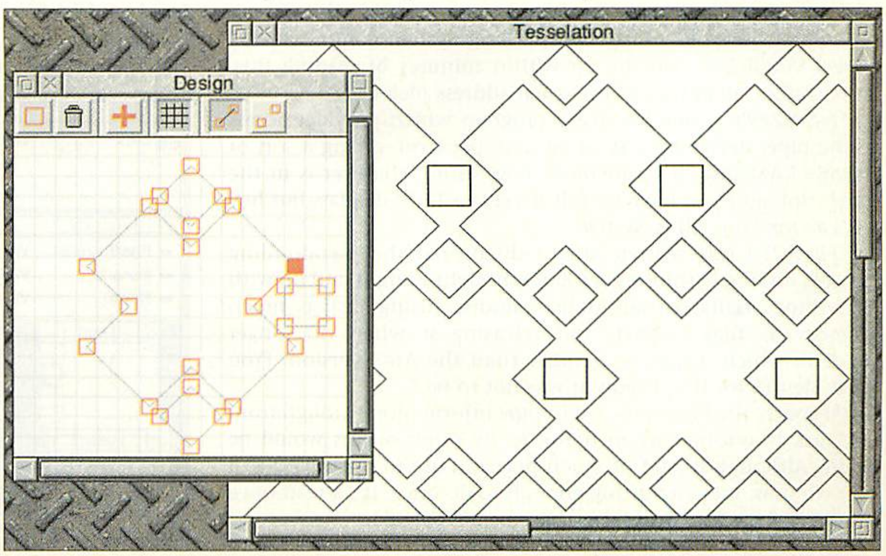
The design window consists of a workspace where you can control the shape that will be tesselated. Clicking on a point selects it and an adjoining line, highlighted in red. You can move the points on the shape by dragging with SELECT. If the 'Gridlock' icon on the toolbar is selected then the point will be moved to the nearest spot on the grid. You can add another point on the midpoint of the selected line by clicking the 'Add point' icon on the toolbar (a red square). You can delete the selected point be clicking on the 'Delete point' icon on the toolbar (a dustbin). Clicking the 'Add new shape' icon on the toolbar adds a new triangular shape to the design.

Clicking the 'Joined points' or 'Unjoined points' icons on the toolbar decides whether the selected line is visible or not. This is useful for creating gaps in the shape outline. Unjoined points are shown as dashed blue lines in the design window, and are not visible in the Tesselation window and when exporting as a drawfile. Note if you have used 'Unjoined points' in your design, you may not be able to fill the shapes in Draw properly. If this is the case, either redesign the shape not to use unjoined points, or leave the tesselation as an outline.

The Arrangement window lets you alter how the shapes are arranged and repeated to make the tesselation. All numbers are in OS units. It is recommended to use the Presets menu first to get the computer to estimate the best way to tesselate the shape, then fine-tune the result manually if necessary. Three methods of tesselation are available from this menu. The Horizontal and Vertical Spacing variables control the gaps between each row or column, the Offset variables control how far each new row or column is indented and the Copies variables control how many times the shape is repeated.

You can save your work as a Tesselation file which allows you to re-load it for further editing later, or as a Draw file, which you could import into a word processor or simply print from *Draw*.

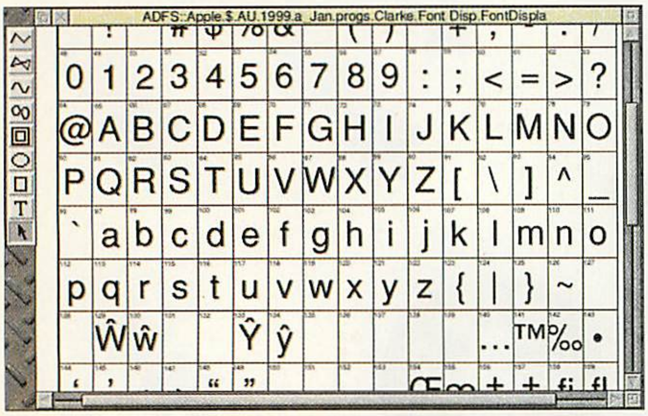
A number of examples are provided in the directory called, er, *Examples*.



Ivor feeling there may be a pun coming

Author: Ivor Clarke

There are those who would suggest that the sole criterion by which we judge the printworthiness of an item is how useful the name of the author might be in punning terms. This is an outrageous suggestion of course, tantamount to slander in fact. **Ivor Clarke**'s submission was chosen purely as a high quality item and has nothing to do with the fact that his forename is unusually flexible in the pun department. Just thought we ought to get that clear from the start. We now return you to your regular programs...



We have long said in *Quit that you can send us almost anything as long as it isn't more than 100K and doesn't smell too bad. As long as it might be of use to, or entertain the great *Info readership, we'll be glad to stick it on the disc. Ivor proves the point with two fonts and a drawfile.

Curiously, one of the fonts goes under the same name as its creator. *Ivor* (the font) is used by Ivor (the chap) since it looks like Ivor (the chap)'s best handwriting. The other is called *Technical*, and is a redrawn, scaffolded, skeletoned version of a font used by Ivor's son for university design work. I am sure you will agree that both are well worth copying into your *!Fonts* directory.

To demonstrate his fonts, and indeed, any others you might care to, Ivor has also included a drawfile called, not-quite-eleven-letteredly, *FontDispla*. Each Ascii character from the Latin set is shown in its own numbered box – just *Select All* and change the font from the Draw menu as required.

If you have a font or two to share with us, or a handy drawfile like Ivor's, why not share it with the world?

16 all out

Author: Nigel Stoner

You've all seen this kind of thing on the Crystal Maze. And you know that in just two and a half minutes from entering the Aztec-style chamber, the civil servant from Didcot is going to meet with a barrage of frantic cries of "Come out, come out!" Well, with a bit of practice using **Nigel Stoner**'s *AllOut* game, you might just get the extra crystal you need to win that abseiling holiday in Norwich you've always dreamed of.

The object of the game is to turn all of the green lights red. Clicking on a light will change its colour but will also change some of the neighbouring ones too. And therein lies the puzzle – work out the pattern and find the shortest number of pressed to produce sixteen red lights.

By default the level is set to *Easy*. *Medium* and *Hard* await the experts and you can even customise the game by designing your own pattern. The middle light in the little customise window represents the one clicked on. Select what happens to the neighbours and click Done when finished. And for the biggest challenge of all, select *Randomise* and try and solve a new puzzle each time.

Put that in your pipe and copy it (rather slowly)

Author: Roddy Graham

Roddy Graham has been exploring the wonder that is PipeFS...

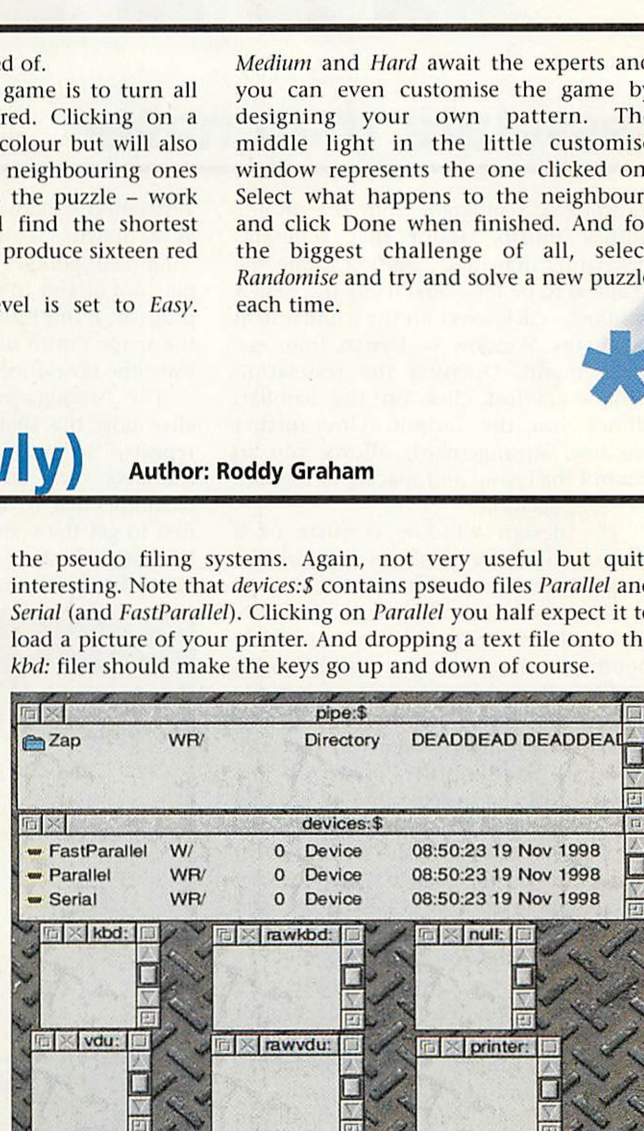
"Several years ago *Info ran a competition to find the most useless system call. I never found one: instead, this is my submission for your Most Useless Filing System comp, which I expect you'll have on the go within minutes of reading this. [Sure thing – all entries to the usual address please...]

"pipefs219'is a one line basic program which provides access to the pipe: device by way of an icon bar icon, giving a sort of flexible RAM disc. It's a memory hog, using whatever is in the 'next' slot, and you have to quit it via the Tasks display, but hey – it's a One Line Filing System.

"pipefs219 was written after I discovered the pseudo-filing systems lurking within my A3000. I thought I might end up with something similar to an Amiga ramdisc (using just as much memory as files needed, and releasing it when no longer needed), which would be handier than the Arc's version. [You need MemFS for that.] Sadly it was not to be."

Of course the PipeFS is used to pipe information through from one task to another when doing so by other means would be fiddly. Although it isn't of much practical use to open *pipe:* as a filer window, it is interesting enough to do once. It's a read-once filing system – files read from the pipe are deleted.

OpenAll is a simple obey file that opens filer windows for all the pseudo filing systems. Again, not very useful but quite interesting. Note that *devices:$* contains pseudo files *Parallel* and *Serial* (and *FastParallel*). Clicking on *Parallel* you half expect it to load a picture of your printer. And dropping a text file onto the *kbd:* filer should make the keys go up and down of course.



The whale is not a fish – it's an insect

Author: Jan Vibe

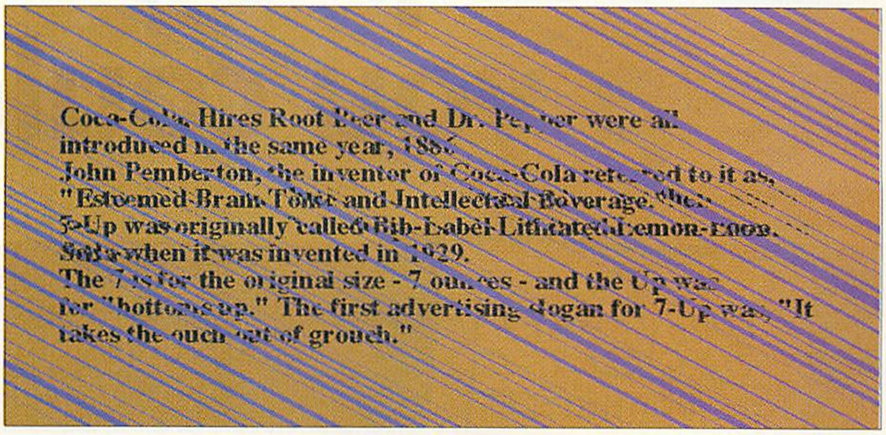
Our Danish friend Mr **Jan Vibe** has been turning his attention to matters factual, although even in this territory he seems unable to resist manipulating the odd sprite mask or three.

"This application displays interesting facts on the screen. It started as an experiment using the font system, but now, it is a full blown application, which displays interesting facts using some special methods of revealing the text.

"The text used by this program is the text file with the name *Text* placed in the *!Facts* directory. The program will randomly select a text, placed between the separator characters %%.

"The selected text is shown on the screen 3 seconds for each line, so a text with 3 lines is shown for 9 seconds. By tapping the keyboard, a new selected text can be made to appear."

In all there are twelve methods used to reveal the next message and these can be found within the main CASE statement. All are quite simple, most involving a FOR...NEXT loop or two and the obligatory *SpriteOp* calls to switch output to a sprite mask and back again.



You only ring twice

Author: Justin Fletcher

Q: How can you tell if the phone is ringing?
A: You can hear it ring.

OR you plug a modem into the line, connect it to your computer and run **Justin Fletcher's** latest module. This monitors the 'Ring Indicator' line on the serial port and when it detects a ring, uses the Speak module to say "Ring Ring" (!). Of course, the action chosen is not the important bit – you could easily change it to do some other task; possibly even something useful. Justin suggests you could switch off the computer sound, or pause the CD player. Source code is provided in Basic and in Justin's own 'JFPatch' format.

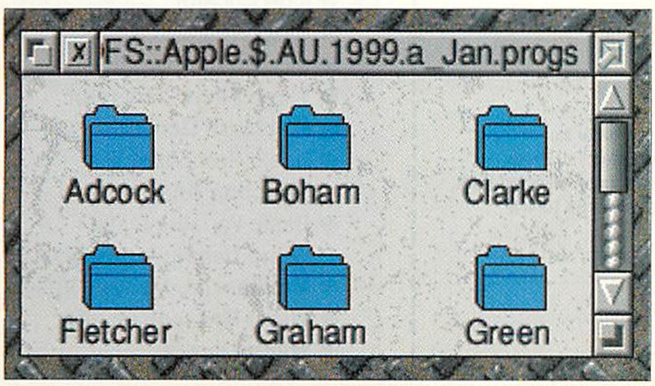
Cool tools and funky hour

Author: Mark Wilmer

You might be forgiven for thinking that *Info has slipped into a bit of a Jazz Club mode. (*Great*) Just a bit of desktop jazzing-up though, courtesy of **Mark Willmer**.

CoolTools is just your regular desktop revamp with a new set of tool sprites. We get a lot of these at *Info and although most are quite fun, there aren't that many that we could live with on a day-to-day basis if you know what I mean. *CoolTools* is refreshingly liveable-with though – even the twirly poles along which the subtly shaded sausages slide. (Hang on while I wipe the saliva from the monitor.)

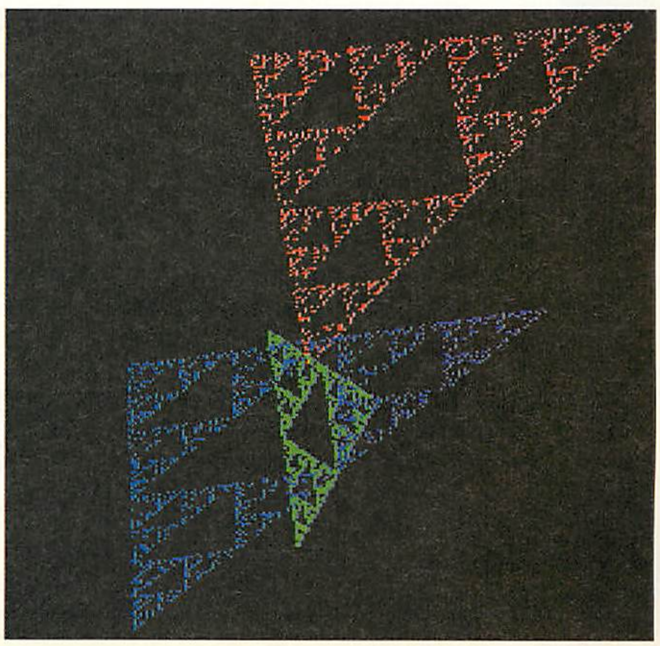
FunkyHour gives a makeover to your hourglass. *FunkyHour* was created using Jon Ribbens' *HourMake* utility and the original sprites are included should you wish to tinker further or merely admire them. Particularly nice is the mini-hourglass which is used as the percentage indicator.



Great galloping gaskets

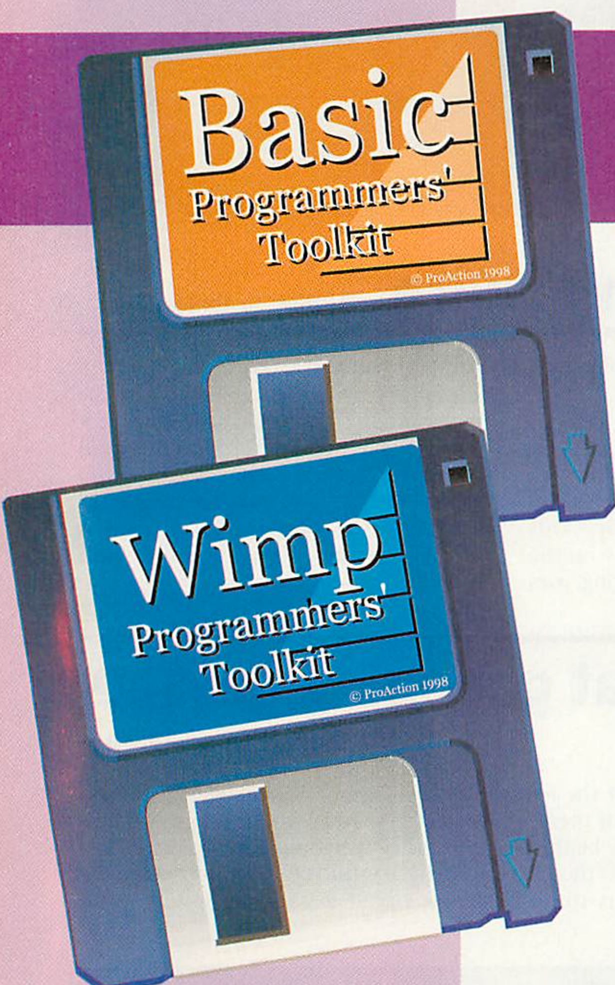
Author: John Whitington

This is not the first time that Sierpinski's famous gaskets have appeared in these hallowed pages, and I doubt if it will be the last. It may be the first time we've seen bouncing red, green and blue gaskets though, and we have **John Whitington** to thank for bringing us this whole new fractal experience. Just run and enjoy.



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- Template Information Utility
- Icon Locator
- Shell Wimp Program
- Single Window Shell
- Wimp Flags Generator
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Watch it – Floating lenses are trouble!

Author: Darren Green

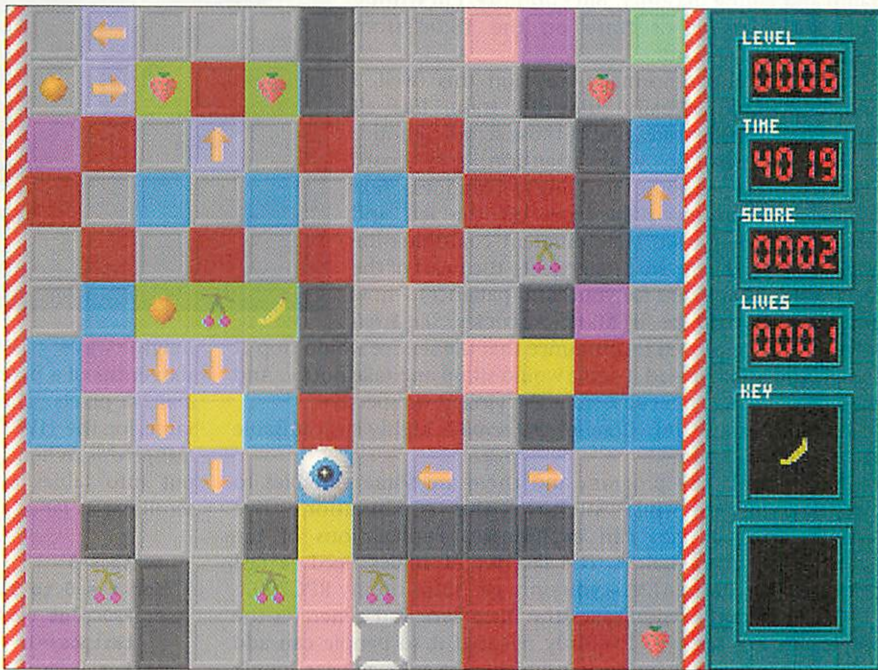
Okay, okay, we have to admit that we have no idea what *Wiflat* stands for, We've searched **Darren Green's** little game for clues but found nothing. Maybe that civil servant from Didcot might have more luck... Whatever it stands for, *Wiflat* is a fun little game that borrows a little bit of *Repton;* a soupçon of *Xor;* a sprinkle of *Sokoban,* served with a coulis of sliding block puzzle.

Play takes place on a grid of multicoloured squares. You use the Z, X, / and ' keys to move a cursor around this grid. The object is to collect the treasure squares coloured pink (1 point) and yellow (5 points) before moving on to the next level. Of course life is never quite that easy – firstly, you are playing against the clock. If you run out of time, you lose a life and the level is restarted.

Secondly, contact with a floating eyeball is equally deadly (isn't it always?). The main hazard though is the special squares that are dotted liberally about each level. You will come across deadly red squares; icy blue squares; fruity keys; speed-up pills; magic mushrooms and even the occasional purple bonus treasure. The full list of special squares and their effects can be found in Darren's help file.

If you get completely stuck in a corner, F11 will dock a life and restart the level. F12 ends the current game and Ctrl+Escape quits the program completely.

Knowing the *Info populace we predict we will now see a steady stream of screen editors, desktop versions and probably even an interrupt-driven computer-play version that uses a wimp filter to display the entire board in the title bar of the task manager.

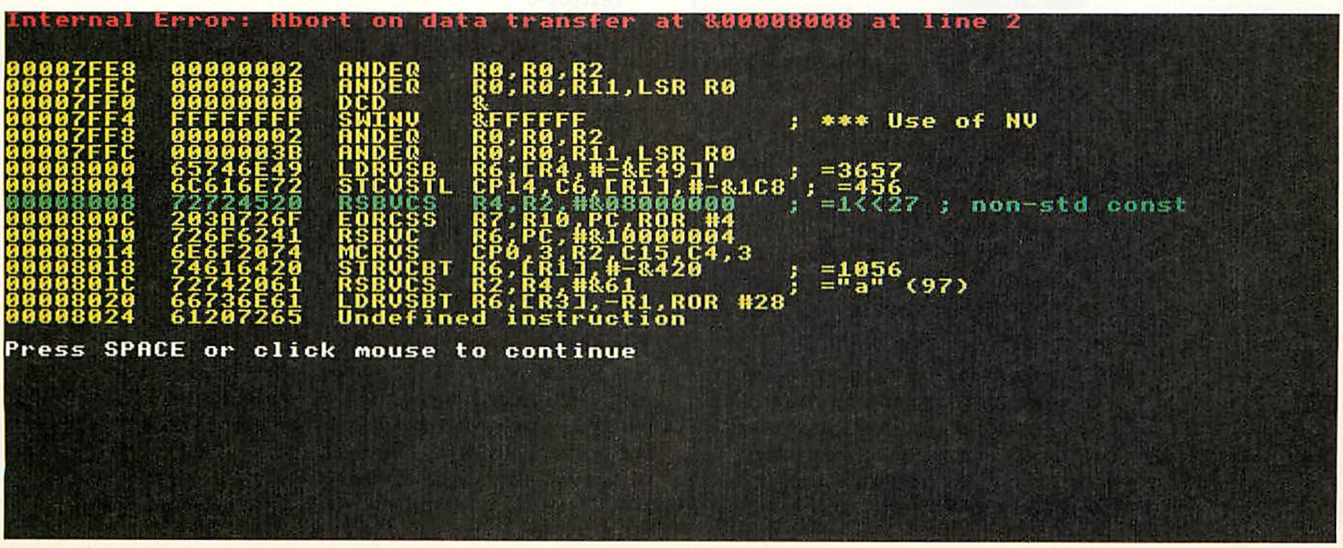


ON ERROR PRINT SOMETHING USEFUL FOR A CHANGE

Author: Scott Boham

We've all suffered at the hands of the fateful abort on data transfer. I'm still not quite clear what a data transfer is exactly, and why it might be aborted. But if you're determined to get to the bottom of such problems, this little programming example from our old friend **Scott Boham** could be just what you're looking for.

It's nice to publish a program whose second line deliberately generates an error. It does so to test *PROCerror*. This simple error handler looks for an address in the error message. If so, it extracts it and then uses SWI_DebuggerDisassemble to list the bit of program around where the error occurred. The offending line is picked out in green. Obviously you can adapt the routine to your own requirements – you could even print the disassembly to a file and then prompt Zap to load it.



This train is for whoaaaooaaoooh!

Author: Mark Adcock



Now I'm not sure what picture you conjure up in your minds when contemplating the scene of we Dave's tapping away to write these five pages of stuff and nonsense. Perhaps you see a gleaming state-of-the-art workspace in glass and chrome; perhaps a dingy attic room, with rising damp and falling masonry. But curiously, I'm writing this particular bit of *Info on the 13:08 from Paddington to Oxford.

Now I wouldn't normally mention this (well, I probably would actually) but this train, like all Thameslink ones features one of those scrolling notice boards. To maintain your attention, said board employs many cunning scrolling techniques. Text comes on from the right, goes off the left and *sometimes* flashes a bit. How different commuter-life might be if (and here, we finally get to the heart of the matter – we thank you for your kind patience) – how different it would be if **Mark Adcock's** *3D Scroll* routine were employed to announce that the service would stop at Slough and Maidenhead. People would sit up and take notice. And then probably feel a bit sick from the violent perspective.

Like all the best *Info doodles, *3D Scroll* is highly customisable as its creator describes...

"Look inside the program and there are some variables to change. You can just stick to the combinations I've recommended or you can experiment. Explanations of the variables are given below. The last set of values needs a fast processor ie a StrongARM – you only get 35fps on my RPC700.

"The program *Convert* takes the file *Source* and generates the letters. It's not pretty – I've only released it so people can add better character sets (mine is rubbish, but took me far longer than *3D Scroll* itself). Each character sprite has three different colours – white, red, and green. A light texture (*tex2*) is substituted for the green and a dark one (*tex0*) for the red. The white part is somewhere in between (*tex1*)."

"You can change the message it uses by changing the file *message*, but be warned, only ASCII 33 to 95 are included in the character set, to save space on disc. Each character is 64 by 64 = 4K, so a full set would use a lot of memory. But I'm also too lazy to draw a full set...

"The positions of the top of the letters are controlled by a sine wave (from now on called the "vertical offset wave" or VOW). The height of the letters is controlled by another wave, the height wave (HW). The VOW progresses at *wave2speed%* sixteenths of a pixel per frame and its peak-to-peak amplitude is *amp2%* pixels. The variables *wave1speed%* and *amp1%* do the same for the HW. The speed of the text in pixels per frame is *textspeed%*. When the program is set up, the VOW and HW are put into tables and some data is calculated. For a normal scrolltext as far as I can work out, you do this:

```
textpos=0
for x = 0 to 319
   PROCplot_vertical_Sliver_of_a_character
   textpos+=1
next x
:
DEF PROCplot_vertical_Sliver_of_a_character
character = textpos>>6
x_position_within_character = textpos AND 63
plot sliver
ENDPROC
```

"As you can see, the character is 64 pixels wide and the x coordinate of the actual character is contained in the bottom 6 bits. If you like, think of it as a fixed point number, with the bottom bits being the part after the decimal point. The 'plot sliver' bit plots a vertical sliver using the height of the HW and at a position determined by the VOW. The 3D Text works like this:

```
textpos=0
for x = 0 to 319
   PROCplot_vertical_Sliver_of_a_character
   textpos+=constant / HW(x)
next x
```

"How much you add to textpos is determined by the reciprocal of the height of the sliver at that point times a constant. So for a tall sliver, you will add a small value, and the letter will therefore appear more spread out on the screen. Because it is more spread out, it will move quicker than smaller (further away letters). This gives you the 3D effect.

"In fact, you have a choice about how textpos is increased depending on the sliver height. It can be a reciprocal of the height (*HorizScale%*=1) or proportiaonal to a constant minus the height all squared (*HorizScale%*=2). The former is perhaps `better' because it uses a division, hence is probably closer to 'real' 3D, but occasionally type 2 looks better. The tables set up at the beginning calculate how much is added to textpos as well as the HW. They also contain data which prevents you having to use a division in the sliver plotter." AU

*QUIT

All programs, applications, hints, tips, drawfiles, fonts, music and more to our regular abode if you please:

***INFO, Acorn User, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP**

or, e-mail us (including your real address please) at: starinfo@acornuser.com

No e-mails longer than 100K please. Screenshots, background info and ideas for customising your program are most welcome. Cover-disc space is limited, so we won't be able to carry massive programs however brilliant.

Please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned. If you are responding to one of our challenges, please mark your envelope accordingly. *info submissions only please.

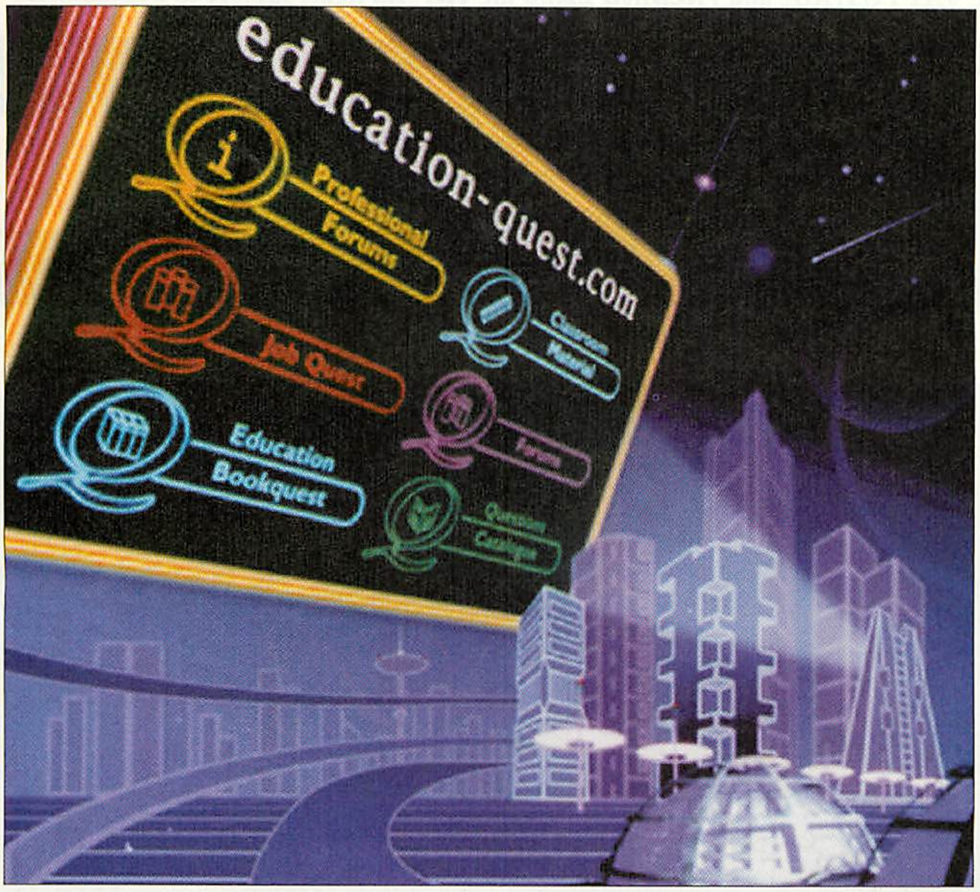
Advice and help

QUESTIONS Publishing (0121-212 0919) have launched what they call a 'one-stop-shop' for educational services for schools and homes. Promising resources and services for pre-schoolers to university students all you have to do is log onto: www.education-quest.com

There are nine services so far on the site ranging from an online book shop to an educational training exchange designed to help teachers in the classroom and parents at home. This bookshop have over 300,000 books, videos and photocopiable resources and educational software.

The Professional Practice Library consists of articles on sound practical and theoretical advice to support their work. To help find what you need articles are grouped as literacy and learning, maths, science, ICT, professional development, school management, resource management and school travel. In addition there are search options to help as well.

In the section marked as Classroom Materials teachers can find curriculum-mapped lesson plans, photocopiable resources and worksheets for primary and secondary students. Added to this are sections on vacancies, legal advice, discussions groups, a searchable database of school equipment and services, and a list of subject-specific courses. Most of these services are free with the exception of the Professional Practice Library and Classroom Materials sections which cost £75 a year each while the online legal advice costs £25 a year.



Use IT

BACK in 1997 the Science Museum launched the STEM Project to encourage schools to visit the Science Museum in South Kensington and share their learning with other schools over the Internet. The Prime Minister gave his support to the project which follows the route the Government is taking of encouraging schools to use and exploit the Internet. This led to the STEM Awards for schools (teachers and students) who create the best web-based resources.

The 1999 Awards have now been announced and entries must be submitted by 21 July 1999 and are split into three categories under 11s, 11-18s and adults. Furthermore, this year's awards is asking for entries from outside the formal classroom by involving visitors to the Science Museum's two sister museums – the National Railway Museum in York and the National Museum of Photography, Film and Television in Bradford.

You can get full details from http://www.nmsi.ac.uk/education/stem/ or by ringing 0171-938 8096.

Top marks

FIVE Star Marketing (0181-950 4973) have produced an Educational CD-ROM which consists of over 1Gb of software for only £25.75. But what of the content?

Five Star's Norman King promises a massive collection of clip-art, fonts, and resources for the entire curriculum as well as a collection of useful web sites. For instance, the History section comes with chronological information as well as information the two World Wars but also a section on Hungary. There are also 50 programs for your Pocket Book and a host of utilities and even the odd game to play when no one is looking.

Animal magic

FED up with the computer looking grey and boring? Setting up a new interactive/role-play corner and want to incorporate the computer? Then take a look at *Monimals*. Made from fur fabric you can slip a cow, lion, moose or sheep over your monitor for a snug fit. These will fit 14 or 15 inch monitors and Sherston (01666 843200) can also supply Monimals for 17 inch monitors too. The cost is £12.75 each.

Words, words, words

ANGLIA (01603 615151) have announced a new Primary Literacy series – although only Level One and Three will be available initially. *Level One* is targeted at Year One requirements of the National Literacy Strategy and takes children through the program with three new friends: a robot, pirate and wizard. Word, text and sentence level work are all covered using these characters and providing five fun activities which would fit well with the recommended carousel approach.

So children may well find themselves creating a book using a branching story, working on muddle activities placing words to make a sentence or using traditional games such as Snap in a new setting to build word blending skills.

Correction

In the Geography round-up in the last issue we stated that *Maps and Landscapes Volumes 1 & 2* were published by AVP. While it's true you can get it from AVP, the publisher is actually Chalksoft (01775 769518).

Contacting me

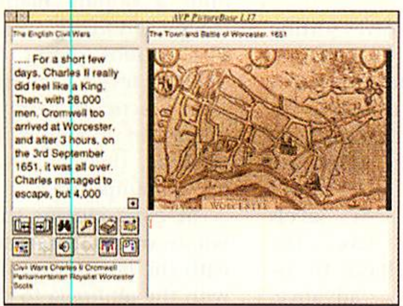
You can contact the Education page by writing to me, Pam Turnbull at Acorn User, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP or e-mail: educ@acornuser.com

Picture this

Pam Turnbull gets to grips with a resource package covering 250 years of information on the creation of the UK

IF *PictureBase* is new to you let me explain the concept. Available as individual modules you can mix and match to create a highly personalised encyclopedia. You may just to want to concentrate on one aspect of history for instance. Then you'll be provided with an overview, a selection of photographs, maps, original documents, paintings, videos and Internet links. The images follow an event or movement in chronological order with text (which can be read to you) and images as well as a section to make your own notes and observations.

AVP have also grouped modules together to follow a particular theme or aspect of the National Curriculum. One of these is *The Making of the United Kingdom, 1500 to 1750*. In effect this is five modules on one CD-ROM: The Tudors, Early Stuarts, English Civil Wars, Later Stuarts, and 1689-1750.



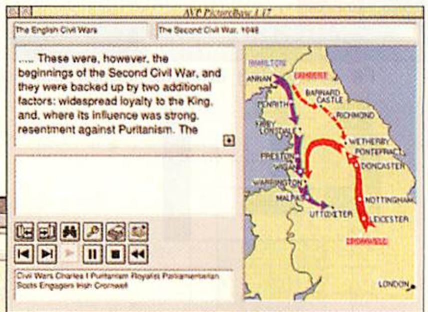
An important benefit of this is that you can follow particular movements or individuals between modules or work back to see the origins of a problem. This is a huge collection of information which touches on the arts, European history and empires, as well as looking at freedom of the press and the satirists of the eighteenth century, religion and society. However, the main emphasis is the political upheavals of the time their causes and solutions.

I found myself concentrating on the English Civil Wars due to some work we were doing on the novel *Children of the New Forest* and I wanted the children to be able to follow and evaluate events sequentially as well as search for particular personalities. The basic *PictureBase* screen is split into description, picture, tools and notepad panels.

The main component is the box on the right featuring a video clip (with its control buttons), photograph, or map. Click on the key in the toolbox to see the keywords associated with the image. A nice touch is the ability to add your own keywords.

The description box gives scrollable background information on the image. You can't change the content of this text though you can change the font size to suit your needs, print it or save it to disc or text editor. As you'd expect images can be saved and printed too. I found I needed to change some of the language used for younger users so I transferred this to the notepad and edited it there, hiding the original description panel through the security options, but still presenting the notepad panel with the new text in it. You can save notepad panels to disc as well.

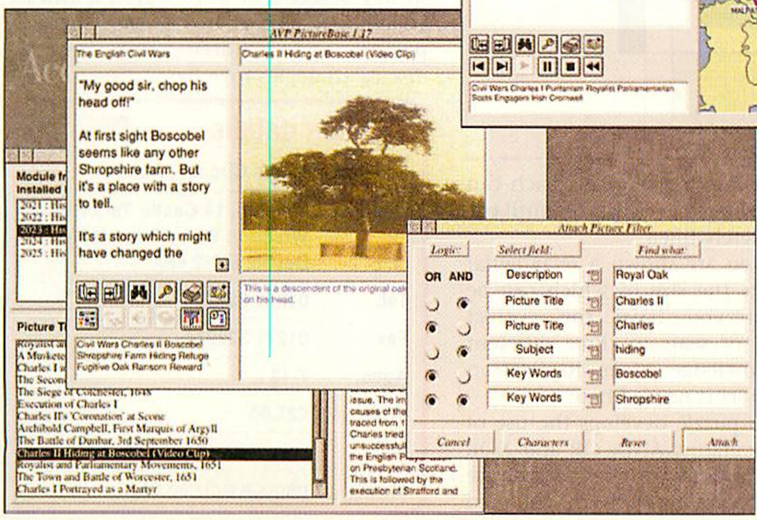
The tools (also accessed via the mouse's menu button) allow you to step through page by page hearing the words read by clicking the speaker button. The portfolio button lets you see all the images in a particular module a single click revealing the title, a double-click taking you to the complete entry. The contents button is especially useful revealing a list of the modules you have installed on your computer with a brief textual review of the content. Highlight a module and the picture titles are listed which you can then scroll through and access as you wish.





Good searches are essential and text in all panels can be searched. The *find* button allows a simple search of words and phrases, while a *filter* search permits a Boolean search and provides a set of pictures matching your criteria.

I found the set up and manual unfriendly though comprehensive. However, the program itself is quite straightforward with shortcut buttons, for searches, speech, contents and so on. You do have to turn security off though if you want children to add their own thoughts to the database. I liked the autoplay option which made it a good initial input device plus the ability to make your own slideshows/picture trail is useful though fiddly. A fascinating era is successfully captured by a good choice of images. Overall a good sound school resource which you can use at different depths depending on your needs. AU



Product details

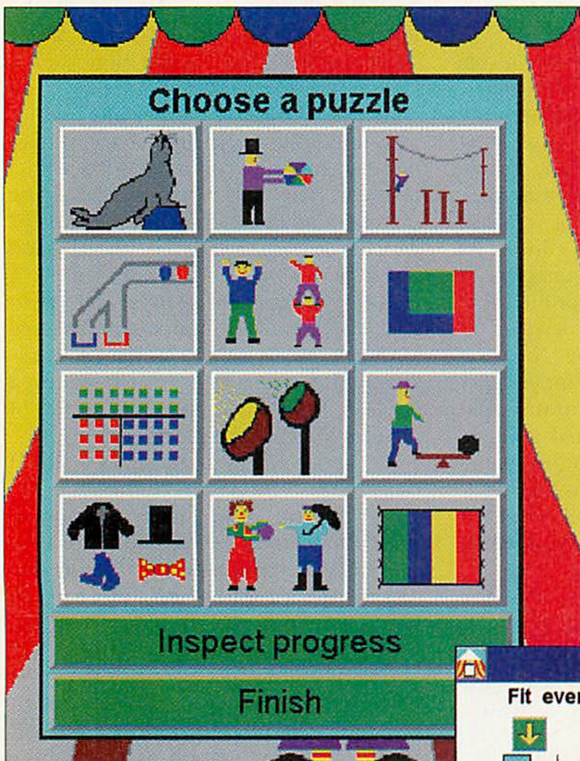
Product:	PictureBase: The Making of the United Kingdom 1500-1750
Supplier:	AVP, School House Centre, Chepstow, Monmouthshire, NP6 5PH
Tel:	01291 625439
Fax:	01291 629671
Ages:	11-14
Price:	£69
Web:	www.avp.co.uk
E-mail:	avp@compuserve.com

Send in the clowns

Di Hillage looks at the maths fun to be had under a Big Top

SINCE the early days of *Granny's Garden* – which still challenges each new generation of children – 4Mation have continued to publish interesting and stimulating pieces of software, often in collaboration with their antipodean associates. *Maths Circus* has been popular for some years now all around the world. The arrival of a second set of puzzles will be welcomed by many users.

The basic format remains the same with twelve puzzles on a circus theme. Each puzzle has five progressive levels of difficulty with the harder levels sufficient to challenge the most determined user.



Progress through the puzzles and their levels is monitored by the program.

Some of the puzzles have parallels in the original version while others bring in different strategies such as sorting and pattern completion. The manual contains hints for solving the problems, which should prove reassuring for adults. It also gives many suggestions for related activities that could be used to reinforce the ideas and strategies used to solve the puzzles. A collection of worksheets for use in such activities is included in the package.

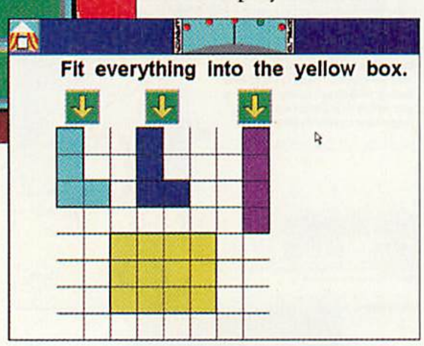
Now to the puzzles themselves ... the *Seals* need objects sorted according to colour and shape. Higher levels involve the AND and OR concepts with NOT and brackets needed later on.

Coloured hexagonal *Mats* have to be rotated and fitted together with matching colours aligned. Some maths teachers will recall the Association of Teachers of Mathematics 'beer mats' on seeing this section.

The tightrope walkers need to build *Towers* to hold their ropes from the pieces available. The simplest level is very straightforward but much more thought and experimenting is needed as you move through the levels.

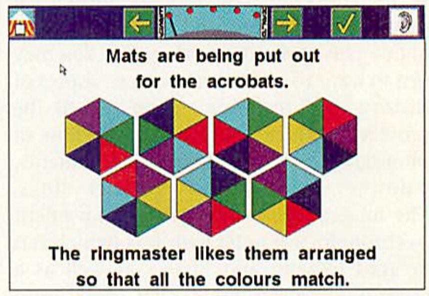
Feeding involves sorting 'vitamin pills' as they drop through a maze of tubes and gates to arrive in various feeding bowls. At level two the steps are entered and carried out immediately. At levels three and five the instructions have to be given in advance, introducing the ideas of programming.

Acrobats is based on the Towers of Hanoi problem. Geometry and spatial awareness are needed for the *Packing* problem. Various polyominoes have to be packed into a given case. Each can be moved or rotated as necessary until the case is completely filled.



In *Seats* you are shown a rectangular block of seats the size of which can be varied until you have the correct combination of seats in three different colours. Knowledge of multiplication facts and factors is needed here.

The *Lights* puzzle develops the use of the logical operators AND, OR and XOR in using the various switches to produce the required combinations of coloured lights. The lowest level only needs the wire for each light to be traced back to its switch. From level two onwards the various operators are introduced giving a neat introduction to Boolean algebra, which is increasingly important in our electronic age.



Basketball involves dropping a ball onto a sloping platform, thence to a seesaw and finally into the basketball net. The various pieces can be moved in different levels. Moving on, *Shopping* gives some practice in basic arithmetic with the figures in a simple array of items of clothing, their prices and the total cost being manipulated.

In *Paint* clowns throw balloon paint bombs with a designated number of lives, with the last throw ending on the clown with the umbrella to shield him from the paint. A good deal of planning and clear thinking is needed to achieve this at the higher levels.

Finally, *Folding Rugs* provides bands of different colours which have to be folded to give a prescribed pattern. This is is easier if some practical folding is carried out first.

This is an excellent package which will challenge and occupy children for many hours. Each puzzle is short enough to be used to fill the odd gap in a lesson. Alternatively a teacher can use them to develop work covering a number of lessons, most suitable for pupils working in Key Stages 2 or 3. However, it will be equally valuable at home, particularly if parents and children work and discuss strategies together. AU

Product details

Product:	Maths Circus – Act 2
Supplier:	4Mation, 14 Castle Park Road, Whiddon Valley Barnstaple,, Devon, EX32 8PA
Tel:	01271 325353
Fax:	01271 322974
Ages:	7-14
Price:	£27.50
Web:	www.4mation.co.uk
Email:	nsouch@cix.co.uk

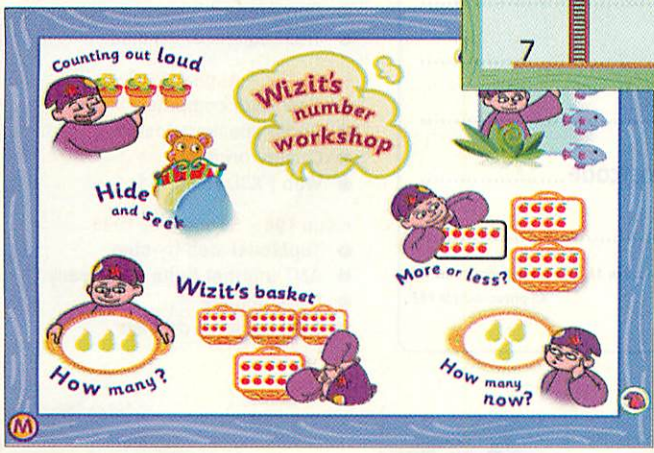
Count with me

Updated and re-issued – **Pam Turnbull** looks at the new basic number program

ORIGINALLY published for the BBC B in 1989 as *Animated Numbers* this is now available as *123-CD*. The target audience is the same: pre-school and Reception-aged children who need to know the number words in the right order, can put a number to every object they count, work out numbers when some objects are taken away or used, know when to stop counting and understand that the number name relates to the amount or value of a group.

This learning process is broken down into 11 different activities which in turn are split into two groups: *Wizit's Number Workshop* and *Wizit's Number Fun*. Wizit is a little wizard who'll reward correct answers with a variety of antics. All instructions are spoken and all words – such as the game names – and read out so pre-readers can access this easily.

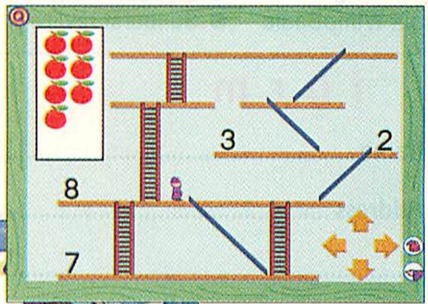
Number Fun consists of four activities two of which (*One Bun in the Sun* and *One, Two Come on You*) are nicely illustrated and animated rhymes counting to 10 in ones and twos respectively. Although you can't adjust the numbers in the rhymes, if you don't want your children to go to 10 on the other games then you need to access the Teacher options on the title screen.



This I found incredibly useful and proves yet again that Sherston's programs are written by teachers who understand the problems children can have. You can present numbers numerically or randomly or isolate groups or individual numbers you want a child to work on. In addition you can choose which of the activities you want to use and how many turns you want to have.

Staying with the Fun section there is a *Ladders and Slides* game which means you have to move Wizit with the on-screen arrow keys to the match the digit with the number of onions in the box. The children I tried this with loved it though wished they could get off ladders midway when there was a platform there.

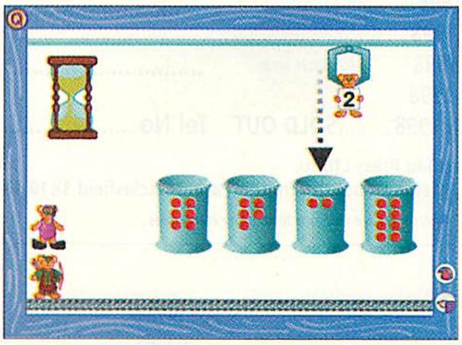
Dress the Teddies is quite challenging too as you must drop a numbered teddy into the container showing the right number of dots presented in an arrangement of two which is used elsewhere in the program and helps distinguish odds and evens as well as recognising numbers by sight. The challenge is to see how many you can dress before the sand runs out in the hourglass.



Turning to the *Workshop* it's here that you'll find seven activities which work on enumeration, cardination and conservation of number. *Counting Out Loud* provides you with a flock or sheep, shoal of fish and so on. Click on each and they walk or swim to their field or pond. With each click they are counted and when in place they are counted again and the numeral appears.

Hide and Seek I particularly liked though it is very simple. Numbers are counted in order (as a number of doors or beds) and are then covered as the beds are made or doors shut. You then have to find Twinkle who is hiding at a particular number. Run out of tries and the numbers are counted in order again and you get another go. The voices are supportive and non-judgemental and allow children to make mistakes and work out their own strategies.

Moving on, *How Many?* asks children to count the number of items in a basket by clicking on each apple for example. As they click the numeral appears, when all counted children are asked for the total number. Get it wrong and the activity is repeated with more support. This is then extended into *Wizit's Basket* and matching sets.



Count with Wizit wants children to move a certain number of frogs into position then the numerals are introduced and the appropriate number needs to be clicked. New mathematical language is used in *More or Less?* as children as asked to make sets with fewer or more objects than in Wizit's basket. None is accepted as fewer which is correct but needs watching to see if children have really understood what they need to do or are just finding shortcuts.

You can access activities in any order but in this run through the final one is *How Many More?* I found this just the thing for one child I was working with who was confused about conservation. You have to count objects, click on the right number, the objects then move around into a different pattern which you need to count again.

As well as a useful and practical manual there are 10 colour pictures with which to make a wall frieze and the ever-useful photocopiable worksheets. Simple and varied games which teach and reinforce important basic skills. AU

Product details

Product:	1 2 3 – CD
Supplier:	Sherston Software, Angel house, Sherston, Malmesbury, Wiltshire, SN16 0LH
Tel:	01666 843200
Fax:	01666 843216
Ages:	3-6
Price:	£29.95
Web:	www.sherston.com

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Shout it loud

The software part of **Mike Cook's** LED display project

Part 2

Last month we saw how to make a large scrolling display, this month we'll see how we can make it scroll. The secret is in the software but with this project there is software at both ends, the PIC and the Acorn. What we need is an easy way to set up messages and effects without resorting to programming. The solution is to use a form of scripting language that is read from a simple text file.

But let's look at the PIC software first. Last month I showed you the PIC software that would handle the multiplexing of the LEDs, mapping the LEDs to its internal memory. Now we must add some commands that allow us to transfer data from the computer into the display. While there is room in the instruction bytes for eight commands, I have only implemented four of them, leaving the other codes free for you to experiment with. The first command, or more accurately group of commands, permit the setting and clearing of the display memory along with blanking the display. When the display is blanked all the LEDs are off but you can still input data to the PIC, then they can be revealed, or the display made to flash.

The other commands allow data to be input to the PIC display memory and also displace or scroll the data that is already there.

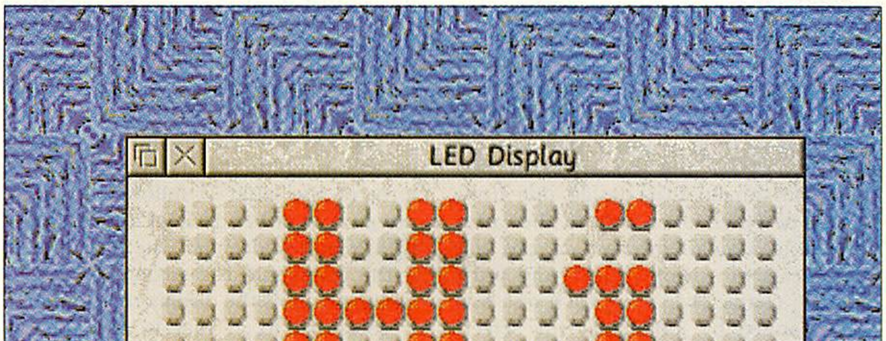
Command 1 inputs new data on the right side and scrolls the other data one place to the left, with the left most column disappearing for ever. Command 2 does the same only from the right. Command 3 inputs data from the bottom of the display and moves the rest up.

Due to the width of data needed here, this command works only on one of the four LED matrix displays at once, so to move the whole display up you need to use this command four times. Also, because of the way the data is organised inside the PIC, to make the multiplexing shifting operations simple, scrolling up is, to use a technical phrase, *a bit of a bugger*. However, by using a series of masks and multiple sweeps through the memory I have managed to do it.

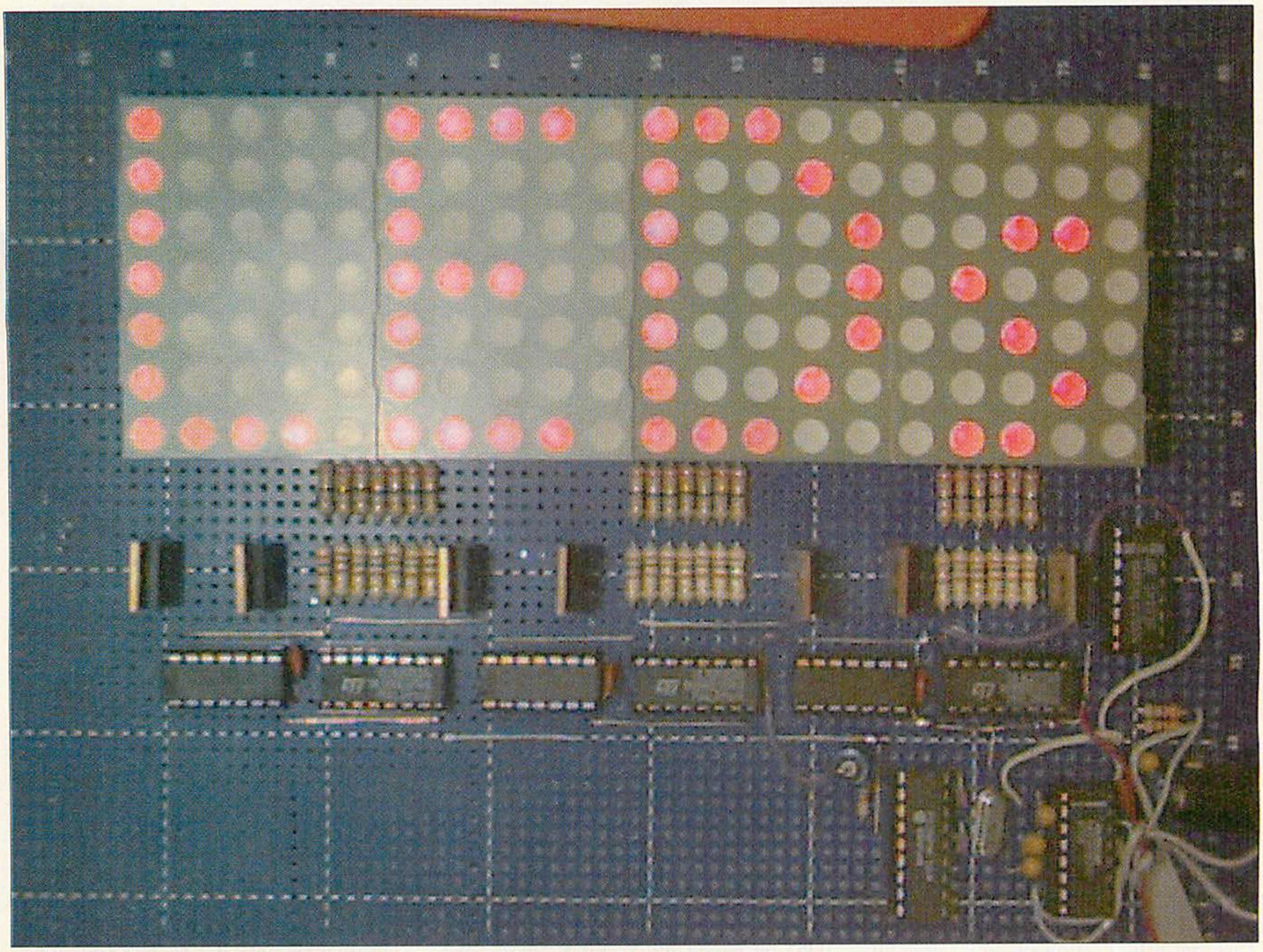
If you want to implement a scroll down you can follow similar logic. Apart from this the other command that you might want to implement is an X – Y switch, that is to be able to control any LED by giving it's X and Y coordinates. The way I envisage this being done is to have a command to write to an X register and another command that would give the Y coordinates and set or clear the appropriate bit. There is plenty of room in the PIC's memory if you want to implement these but you can achieve a great deal with the commands I have already implemented.

The source code is on the cover disc called MultyP. Note that it takes a little time to implement a command, especially the scrolling, which involves moving a lot of memory about. While the PIC is doing this it can't respond to new commands so if it is sent commands too rapidly it will ignore them until it is ready. So if you find the display ignoring a command just give it a little time to complete the last one, we'll see how later.

Now in order to test the PIC there are some simple programs to drive the display with test patterns. These are in the folder called "simple". One of these programs



The virtual LED display mimics LED block 0



The real LEDs in block 0 will display the same as the virtual lights

(LED3) makes use of a data file who's full path name is hard-coded in the program. This means that you will need to copy it onto your hard drive and edit the path name if you want it to work, otherwise you will get a "File not found" error.

While these programs are fine for testing the unit they are not very user-friendly when it comes to actually using the display in anger. What we need is a simple way to input messages by using a text string. In order to do this you need to have a character font file. There are two ways you can do this, design one from scratch or pinch one. I chose the latter and wrote a small program to put the computer into a simple mode and print out each character in turn, each one was then scanned by looking at the screen pixels and the results stored in a file.

The program is in the simple folder. This resulted in a chunky 8x8 file so I had to do a little tweaking to make characters with lower case descenders like q and y to make them fit on a 7-bit high display. A thinner character set could be devised along the same style as I used in some of the simple programs, this would have the advantage of being able to fit more characters in any given display setup.

Having worked out a font we now have to decide how to use it, my solution is the application *!LEDs* on the cover disc. This is a virtual desktop version of the actual display, to drive it you simply drop a text file onto it and it will respond to the commands exactly the same way the hardware will. The only limitation is that this virtual display always has an ID of zero where as the real ones can have an ID of 0 to 15. The text file it reads contains two types of commands, high-level and low-level.

The low-level commands are simply passed straight to the display and take the form of the letter D followed by three numbers in either decimal or if preceded by a & in hexadecimal. The first number is the command, the second is the data and the third is the display the command is addressed to. If that is zero the on-screen LED array also responds. Note here the computer does the job of combining the command and address plus setting the most significant bit on the data byte so it is a little simpler than sending the commands directly.

However, the power of the application comes in the high-level commands, these are translated into a series of low-level commands to send to the PIC by the application. These consist of one letter, a number and sometimes a string. The number is always the delay time in centiseconds to use. So, for example to scroll a message in from the left quickly you could use:

```
L 1 "The Message"
```

Whereas making the number something like 50 would force it to take a lot longer to scroll. The command H 100 would halt the display for 100 centiseconds or 1 second, where as B 50 would blank the display for half a second. S 40 would scroll the existing message off the top of the display as there are 7 rows it would take 7 x 40 = 2.8 seconds to complete the operation. There are others, see the help file inside the application for a full list of these and what they do. Also there are a few example script files for you to play with, even if you haven't got the hardware you can get an idea of what it can do from the virtual display.

While this project is complete in itself like all good projects there is plenty of scope for enlarging it to suite your own needs. For example there are now multi coloured LED matrix displays available, you could use some of these to make a colour display system. However, I am aware that this is one of the more expensive projects I have described, look in next month for a much cheaper one. AU

Acorn Wood

Rambles through Acorn Wood

Mike Cook examines some wild flowers

I came across something strange while developing this month's hardware project. When I was running the LED program sometimes the computer wouldn't shut down properly but would just hang with the hourglass. Pressing Alt+Break invited me to shutdown an unknown application. If I did this the shutdown would proceed as normal. I finally tracked this down to a couple of bytes being left in the serial output buffer. I used the fact that they were not removed to test if any hardware was attached but I had failed to flush them out. I didn't know that would cause shutdown trouble, just shows that you never stop learning.

There appears to be a problem with my software on the December cover disc, the main application is just an empty directory so I have put it on this month's disc again.

Several times I have had readers saying that they couldn't justify buying the Programmers reference manual, especially just for Basic Wimp programming. Well this month I came across a much cheaper source of much of the information, its on the next at:

```
http://www.comlab.ox.ac.uk/oucl/
users/robin.watts/Docs/index.html
```

Last month Jason Strong was after a mathematics package, well I came across one on the net, here's what its author had to say about it:

"*Rlab* is an interactive, interpreted scientific programming environment. *Rlab* is a very high level language intended to provide fast prototyping and program development, as well as easy data-visualisation, and processing.

"*Rlab* is not a clone of languages such as those used by tools like *Matlab* or *Matrix_X/Xmath*. However, as *Rlab* focuses on creating a good experimental environment (or laboratory) in which to do matrix math, it can be called "MATLAB-like" since the programming language possesses similar operators and concepts.

"*Rlab* does not try to be a *Matlab* clone. Instead, it borrows what I believe are the best features of the *Matlab* language and provides improved language syntax and semantics. The syntax has been improved to allow users more expression and reduce ambiguities. The variable scoping rules have been improved to facilitate creation of larger programs and program libraries. A heterogeneous associative array has been added to allow users to create and operate on arbitrary data structures.

"*Rlab* is copyrighted with the GNU General Public License, and is free (in the GNU sense) for all to use."

The place to find out about it is http://www.eskimo.com/~ians/rlab.html

Mark Leggett has been digging through his junk box and came up with an old scanner:

"I have a black and white scanner that was connected to an Amstrad PCW and was wondering if I could connect it to my Archimedes A3020. It is a Naksha Scanner, hand-held, it has a 8 pin DIN plug on it. I haven't got any diagrams for connections. I don't think it would be possible but it is worth a try."

This is not really a practical proposition, it probably could be made to work but you would need full information on it and also the ability of writing your own driver. In the end the effort would far out weigh the value of the scanner, especially as they are so cheap nowadays.

Louise Slattery has had a small accident with her computer:

"I have an Acorn A7000 and recently the name of the hard disk has been changed by accident; this means that whenever I start the machine I get a message telling me to insert floppy disk "HardDisk4" previous hard disk name, I have been able to get round the problem by holding down Shift while booting up but I would like to resolve the problem and have the computer working as normal once again, can you help me? Also, how do I configure my computer so that the printer driver loads when the computer is booted up?"

What has happened is that the name of your hard disc has been written into the boot-up sequence. There are three possibilities: Firstly it might be the Acorn boot sequence itself, there were some versions which had the hard disc name "hard-wired".

Alternatively someone who's been installing software on the machine has hard-wired the hard disc name while doing it. Finally it's possible that a program that's being run correctly has itself got the hard disc name hard-wired into itself, but I don't think this is the case here.

When you hold down Shift the computer bypasses the boot sequence and comes up with default options. You can do this and then use the *Name Disc* option on the hard disc menu to change the name back to *HardDisk4*. This will stop the fault from occurring.

Now you need to take a look inside !Boot.Choices.Boot the files you want are the *Desktop* and *PreDesktop* files. Load these into a text editor – such as *!Edit*, *!Zap* or *!StrongEd* – and look for places that contain the name of the disc, you can use the search function. What you might find something like this:

```
Filer_Boot ADFS::HardDisk4.$.
Apps.!Alarm
```

What you need to do is replace every instance of ADFS::HardDisk4.$ with Boot:^ like this:

```
Filer_Boot Boot:^.Apps.!Alarm
```

Now try changing the hard disc name again. If the fault recurs, load up the files *!Boot.!Boot* and *!Boot.!Run* and look for any mention of the old disk name. In this case it'll probably be something like:

```
If ... Then Run ADFS::HardDisk4.
$.!Boot.Something
```

Change the ADFS::HardDisk4.$.!Boot. to Boot: so you get:

```
If ... Then Run Boot:Something
```

Make sure you make copies of all these files before you start fiddling with them, just in case you make a mistake. If the problem still persists it's something more hidden and it will take quite a lot of searching for.

To configure the computer so that the printer driver loads, find the *!Boot.Choices.Desktop* file and add an extra line:

```
Filer_Run Boot:^.Printers.!Printers
```

Which assumes your *!Printers* application is in the *$.Printers* directory of the hard disc.

Chris Stedham from the University of

Sussex wants a bigger hard drive:

"I have an A4000, I want to increase the hard disc for a larger one. I believe I can use any 3.5in IDE drive but if it is larger than a certain size I can't use the full capacity. I have heard that it is possible to use partitioning software to access drives up to over 1Gb. Is this information correct? If it is can you advise me which software, in your opinion is the best. I hope to get quite a large hard disc."

Versions of the operating system prior to 3.6 imposed a 512Mb limit on the size of attached hard drives. Therefore as you say if you want to use a larger disc on the older operating system you will need to split it up into a number of partitions. As far as I know there are not many alternatives for partitioning software. Simtec have produced an IDE module which enables you to attach larger hard drives and also lets you use an ATAPI CD ROM on the A310 and upward including the A3000 and A4000 series computers.

The upgrade software for this board allows you to partition your discs. An alternative is the software from Yellowstone, this will also allow you to partition your discs. If you have RISC OS 3.6 or 3.7 you can have drives up to 16Mb, but due to a feature, if your drive is over 2Mb only format or initialise it using the beta version of *!HForm*. Acorn advise initialising it if formatting does not work, but you must set ADFS buffers to 0 to guard against a bug in the ADFS filecore that could possible damage the data on your disc. I am told that RISC OS 3.71 on the A7000+ has this one cracked.

Shawn Fendley is puzzled about the PC capabilities of our machine:

"We have an A5000 computer and a friend who has the same machine has PC capabilities. She insists this that this is on an installed chip, PC card, but a dealer has told me that you can not get a chip for the A5000. Is this so or if you can get a chip , how much does it cost and who would supply it?"

I think you are confusing a 486 processor card, available only for the Risc PC, with a PC expansion card, available as a podule for any Acorn machine. The podule cards were at one time being sold by Atomwide but I am not sure if they still sell them as they tend to cost very much more than a complete 486 system nowadays."

Matthew is wanting to mind his language:

"I am currently studying for an A level in Computer Science and I have been told we are going to have to program in Pascal. Is there a version of Pascal available for the Acorn machines, preferably free?"

I have managed to track down two versions of Pascal: Acornsoft ISO-Pascal is still in the Acorn Product directory. It is listed against Oak Solutions but I'm not sure that you would be able to get hold of it. Cambridge Pascal is listed on the Acorn Cybervillage under Liquid Silicon Online Shop. Neither are free.

J. A. Hodgkinson sent this to me before last month's article on programming in Java which for me is next month's article, this is doing my head in:

"I'm am currently studying a Computer Science and Neuroscience degree, and we are learning Java on the Unix systems. I am not familiar with the Internet as yet and I am trying to find an Acorn Java compiler, and the necessary software to run it, for a Risc PC. Please could you send me some info on how download this from the Internet or any other method.

As you saw in last month's article there is a Java compiler available for free. Just to remind you you can get it from: http://free.prohosting.com/~chocky/java/guavac/

Downloading from the Internet is as simple as clicking on the download button from your net browser when you are on that page. It's about 1.7 Mb so you just can't squeeze it onto a floppy. Acorn have a Java interpreter which they sell for £40 on CD ROM, this should be available from any Acorn dealer.

However there might be an alternative high tech solution to your problem. If you can get the Linux operating system to run on your machine (it's possible but not simple) you can get several Linux Java compilers. Check http://www.freshmeat.net/ for the latest releases in the Linux world.

Linux can be downloaded from the Internet but is quite large (well over 100Mb). If you want to find Linux on the net then try http://www.arm.uk.linux.org/. However be warned that it eats system resources and you require at least a free 500Mb drive and 32Mb memory to get it running satisfactorily.

Mr C T Fendley has an eye on expansion before he has even got his computer:

"I will soon be getting a Risc PC 600 and I would like to know if this is upgradable. I mean like putting a better mother board and things like that?"

There are no motherboard upgrades. The main thing you can do to a 600 is to upgrade the sound to 16 bit audio, this brings it up to the 700 audio standard. However, if you really want to make it fly fit a StrongARM processor.

D.A.S. from Warminster wants to speed up sprite plotting:

"What is the fastest way of plotting sprites (or graphics in general) in Basic? Currently I am using SYS &34+256. Would sprite plotting be faster using C/C++ and if so which compiler would be the best to use? I am also currently teaching myself ARM assembler. Is there an easy and fast way of plotting sprites in assembler? Is it worthwhile purchasing a copy of the Acorn assembler?"

The quickest SWI call to plot a sprite is *SYS(&2E),28,pointer to control block, sprite pointer, action*. In addition by using the +256 you are plotting by name whereas if you find the sprite pointer and use +512 the plotting code can go straight to the right place.

Using C or assembler isn't faster because you're using a system call and all the work is done in machine code by the operating system. But the surrounding code will be faster in C or Assembler but you don't need to buy Acorn Assembler because there's an assembler built into Basic anyway.

The only problem with using these calls is that they are designed to work with most combinations of sprite/screen mode and the flexibility does take time. If you are working on a game which requires rapid sprite plotting your best bet would be to develop a few machine code routines to plot your type of sprite into your screen mode or use one of the free games libraries.

Bell has the sort of problem I like, not only does he pose the problem but then a week later he goes on to solve it too:

"I am writing an application and I want to read window title data. This is all right but sometimes this data is indirected. SYS"Wimp_GetWindowInfo" gives the pointer to the original indirected title data at the time the window was created or when it was read as a template. But applications can reallocate the memory used, once the window exists, which is why the location no longer necessarily contains the data.

"I've even tried using SYS"Wimp_GetIconState", using the title bar icon of -4, but this doesn't work either. The Wimp must keep a copy of the title data somewhere else. But where? And how can I read it?"

And then the light dawns:

"I've done it. You have to use SYS "Wimp_TransferBlock" to get the complete window block from its owner. Don't bother with this problem any more! Thanks for being there."

Finally someone just signing himself Kato is keen to throw down a challenge to any programmers with spare time:

"This is a request to all the programmers out there. On the PC is a piece of software called WinAmp, which is fairly (all right, very) impressive, it's a music player which is user configurable to the extent of modifying the interface style, it can play almost any format (by adding in various plug-ins), from MODs to MP3's, and it also looks quite cool, with some rather nice demo-style plug ins to do full screen effects while playing music. Is there any chance that a similar program could be produced by one of the programmers out there? One of the main features is it's extendibility, as it adds enormously to it's capabilities." AU

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LETTERS

Sibelius finished

Having read the music article in the Christmas issue I thought I'd write with my thoughts on the subject. I am a professional musician, who through a combination of circumstances, has found himself out of work for the past two years.

When I first became unemployed, I looked around for some other way of earning a crust, and came up with music copying. Having struggled manfully over a number of years with a dreaded PC and having used an early version of *Finale* and testing out *Score*, I was not too keen on using any of the software available on that platform.

Initially I was advised against buying an Acorn to run Sibelius, because it was described as "a dinosaur" of a computer, and that the software was either "too simple" or, in the case of *Sibelius*, "not up to the exacting standards of the publishing world". However, having tested the system, I was immediately won over.

When Acorn announced the closure of the workstations division I, like many others were shocked, but not so shocked as hearing that Sibelius Software were therefore not going to produce the forthcoming upgrade for the Acorn platform.

Some months previously I had asked the company a specific question about versions for other platforms. (I had recently returned from a trip to Belgium where colleagues had enthused about Sibelius, but were unwilling to buy a new machine to use it on.) I was told in no uncertain terms that under no circumstances was the program going to be made available on any other platform because it was *impossible* to do so.

Now we are told that not only is it possible, but that Acorn is the only platform that will not benefit from the new upgrade.

I understand the reason for this, (the C++ compiler problem) but surely there must be an answer somewhere. In the Acorn developers world, especially those at Sibelius who have profited so much from their loyal followers in the music business, is there no-one who could take what Acorn have developed and finish the job – or am I being naive?

I am someone that only bought an Acorn because of Sibelius software, and now am totally hooked on it. I feel outraged that I am now being told that I have to buy a PC if I want to continue with what is undoubtedly the best music publishing software in the world, especially as I had only days before the announcement traded in my A7000, and bought a Risc PC

I should now say that continental colleagues who have seen the Acorn in operation call it the "Stradivarius" of computers.

How right they are.

The one consolation to this sorry mess is that, like the Stradivarius violin, Acorn computers (rather than Acorn Computers) will still be around and working long after the the latest offering from MS is in the skip.

Steve Reading
sreading@argonet.co.uk

The way forward?

I agree with some of Mike Kingham's opinions regarding Linux and Acorns. However, I do not feel that the situation has to be all or nothing. The basic Acorn

More on Linux

Just recently I was reading some news articles that the open software version of Unix (Linux) is starting to make itself known on the computing world. Even Microsoft is taking notice. This is a great and very flexible operating system that is used on many different platforms including my own 486.

Because it is open software, it means that the source code is available to anybody that wants it. This is just the thing that the Acorn platform needs to gain recognition. Programmers that are unsure about programming on an unfamiliar platform under an unfamiliar OS. With Linux, you have all of the same utilities whatever computer you are using including interpreters and compilers for many different languages.

Acorn should follow in the footsteps of Hewlett Packard and give its support to Linux, perhaps even authorising or even producing a RISC OS version of X Windows. This would be a brilliant boost for the Acorn market and well worth the effort. The brilliant thing about Linux is, it doesn't have to be Acorn that produces this OS – it can be any programmer that feels like a bit of a challenge. The hard work of designing the system has already been done, all you have to do now is make it run on an Acorn.

Pascal Dennerly

Your enthusiasm is to be admired but there are one or two problems. First of all, Acorn (the company) really don't care about operating systems anymore, and a version of X Windows already exists for Acorn machines and has done for many years.

Producing an operating system is a little bit more than a "challenge", ask those who have tried. It takes a vast amount of work – even the chap who's (only) replicating the GUI in Java, see the PD Pages, is requesting help.

There are a lot of advantages to Linux, but the thing that makes Acorn machines the ones that we love to use is RISC OS itself. Take that away and you don't have the same machine.

Dicky F

Dr Lake from Billericay has a problem with his Epson Stylus printing "F" on each page (Acorn Wood – Christmas issue). I had the same problem with my Stylus Color 400. The cure was to switch to the disc version of *!Printers* (1.53) and the driver supplied with it which Beebug kindly supplied. Oddly enough this is an earlier version than that supplied with my StrongARM but it works fine.

John Purser
john@purser.demon.co.uk

/Phoenix/???? should be an NC-based system. (running RISC OS, TCP/IP, Web-browser and Microsoft workgroups/SAMBA from ROM) running with or without drives depending on situation.

Linux could be run from hard drive on machines in a more demanding role. Linux software developers could be targeted to port their software to ARM. Ideally extensions to RISC OS allowing it to run the same binaries as ARMLinux, would be created, removing the need for two versions of each program.

All new motherboards should be ATX based and use PC peripherals. This removes all other hardware design and offers maximum flexibility to resellers. (Upgrade PCs into Acorns, or supply either with the same build system). In a standard case, it should be possible to fit one podule slot above the Keyboard and other connectors, (some connectors therefore would have to take up an expansion slot but there would be more than enough for PCI).

If a custom case was used the same mother board could have several podules fitted. The same board could be used in any thing from a diskless workstation on a network or an internet access box via a TV, to a full blown system. The main options would be: Network card, MODEM, LS120, CD/DVDROM and Hard Drive. The motherboard should support LS120 drives. Since they are IDE this should remove the need for a floppy controller.

I would also like to see support for Sony Playstation joysticks rather than PC-style ones. Interlaced, anti-aliased Standard 640x480 and 768x576 screen modes should be supported on SCART TVs. The OS needs support built in for networking to Windows workgroups and accessing VFAT disks (Win95 names). Support for the more common Windows hot keys Alt-F4 Alt-Tab etc would be a good idea as well.

Since Intel has fallen out with Microsoft and is now embracing Linux, and they now make the StrongARM, there is the possibility that they might be quite happy to see a large new market for them (without AMD, Cyrix and so on). Maybe they will even buy Acorn for its ARM shares and release RISC OS under GNU public license to stimulate the market. More realistically, however, they will probably not be hostile to the prospect of StrongARM-based Linux machines.

Jess Hampshire
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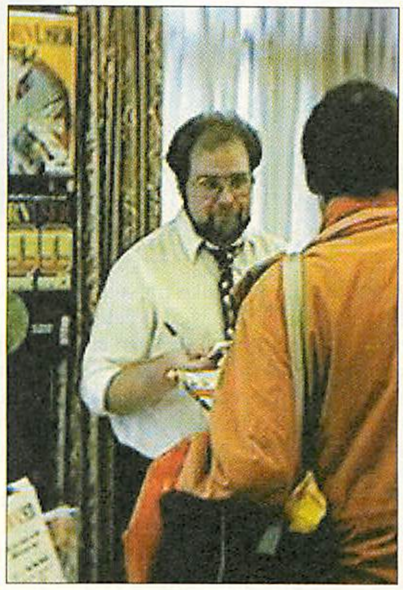
I was really pleased to read Chris Tatam's letter about using suitably sized storage boxes for storing floppies and other media. The approach of finding something suitable for a task, rather than just using the off-the-shelf product can lead to great rewards.

I've always had the problem of storing a large collection of CDs, many of which are singles and therefore make bad use of convential CD racks. I have now found the perfect solution. The boxes that my toner cartridges come in, I have an excellent HP LaserJet 6L and the toner boxes are the ideal width for CDs. Simply cut the box in half, strengthen with a few bits of sticky tape, and hey presto, a modular, expandable CD storage system allowing easy viewing and access to all CDs. The system works well with any number of markers, to show which CDs are currently in use and so on, I use old bits of card.

Richard Adams
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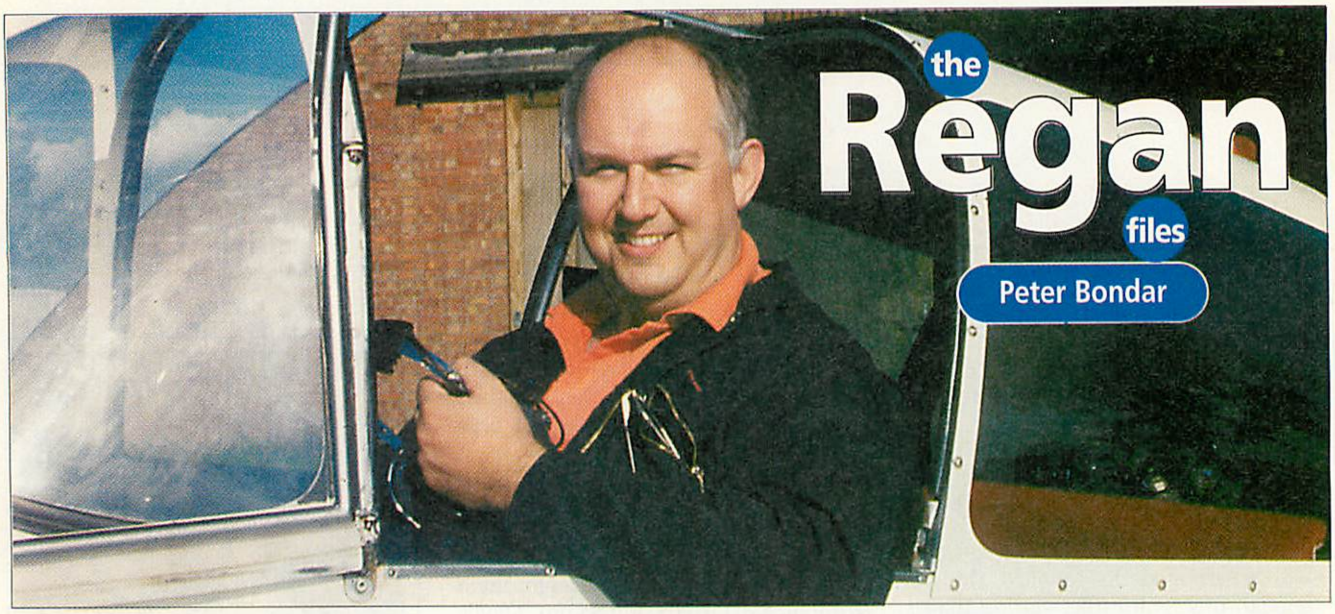
It seems that things may be beginning to move at last in the future developments of RISC OS, which cannot be anything but a good thing. Certainly the buzzing ARM Club event showed how much life there is in the Acorn market – we may have been KO'ed but the count hasn't finished yet.

There is a business philosophy that says no excuses are permitted, if your business is going downhill it's no good blaming outside influences. After all if you didn't see it coming – or at least, be able to do something to make it better – then it's you as manager who are at fault.

The closure of Acorn's Workstations is a case in point, essentially the management claimed (by their actions) that they could do nothing about the declining sales of their desktop machines. It's an admission of failure, and personally I wouldn't want people like that running what's left of Acorn's business – because whatever happens it won't be their fault, it will always be someone else's.

The Acorn dealers and developers however, have got together and said "something can be done about it." And they're right. The future of RISC OS doesn't have to bleak.

Steve Turnbull



the Regan files

Peter Bondar

I'm in what feels like the aircraft hanger at the end of the world. Peter Bondar is making something to fly even closer to the sun in – a full-size plane he's building from a kit on the edge of Cambridge airfield. But it's the day after the dealers' bid (headed by Peter) to rescue Acorn workstations has failed, so he's a little subdued.

"I am an open person, I try to portray an open, very detached view, no hang-ups or anything," begins Peter. "Basically over the last two weeks I have tried to put a deal together and in fact up until Friday afternoon last week I thought I had sorted it all out. I had found financial backers, I had found a product company, I had a memorandum of understanding signed with Acorn, we had a good meeting and then for reasons which still aren't obvious Acorn decided to basically destroy the whole deal as of now.

"Acorn has essentially gone behind our back and approached the product manufacturer who we had identified to work with. We had a deal, Acorn chose to break this deal, and there is really no point us trying to put together any other deals. It takes everyone to co-operate. I suspect Acorn was shocked that within two weeks we had a multi-million deal. I think it was a political thing."

This is not, of course, the first time that Peter and Acorn have parted company. Earlier in the year he was one of a number of people who left Acorn under unclear circumstances.

"I was fired as part of a *coup d'état*. Myself, the managing director and two other directors were essentially fired in a power struggle. There were two views of the way forward: the MD, I and the other two thought it should go one way; the finance director with support from non-exec board the other. When the shooting started we had chosen which side of the line we wanted to be on.

"It was essentially an ideological difference of opinion which caused the end of my role in Acorn. I would not have wanted to leave Acorn, but in the situation even if I had not been fired as such, I had no option but to resign, it was a mere technicality. I would have resigned if I had more than 17 minutes between the start and the finish of the shooting, that is how long it took."

For a variety of reasons Peter decided not to try and find a job straight away, recognising a once-in-a-lifetime opportunity to build a plane. Every morning he would drive to Cambridge airfield, to the South Side Flying Club. Plane building is highly regulated and the plane has to be certified OK at various stages of construction. Coincidentally, Peter came up for air the day before 'Black Thursday'.

> **I am an open person, I try to portray an open, very detached view, no hang-ups or anything**

"I am a great believer that there must be a greater god somewhere that looks after these things," muses Peter. "My father died a few days before the Risc PC launch; after the launch I took his ashes back to the Ukraine. He had left there in the midst of the Second World War bloodbath.

"I tried to take his ashes as close as possible to where he came from, but not knowing exactly I chose a random field. Then the final night I was in Russia in a hotel in Kiev when the phone rang. It was 3am and there was person shouting in Russian down the phone 'Bondar! Bondar!'. This was Ivan who was my second cousin and it was only 50 yards from where I buried my father's ashes to where he lived – he actually managed to track me 500 miles and located me down in the hotel after going to every hotel in Kiev.'

Peter returns to Acorn's recent problems:

"Acorn decided to pull out. The problem was that everyone else's livelihood was affected by it, but because of the fact that in that sense I had left the Acorn world I had not any financial interest in it, except for personal interest. Basically I said I felt I could try and put a deal together but it needed a group of other people to pay me, as you pay a consultant to try and do it.

"The trouble with the Acorn community is that everyone does things for free or a contra-exchange black market type of thing. I could have worked three or four weeks on this or I could have either been building my plane or working as I already had a job lined up.'

Peter openly admits that the Risc PC 2 was later than they wanted, simply because they got so much business in when ART started going. They had to deal with the new technology clients first which meant the Risc PC had about year of being seriously deprived of resources.

"I felt it was a very good symbiotic relationship between the two different areas of activity," says Peter wistfully. "I don't accept Acorn's excuse they just had to trash it. I think the problem was that people see these very clean companies that appear to have very few people, huge sales and massive profits, and thought Acorn should be one, but Acorn is not that kind of company."

In the short-term Peter is probably going to be an interim manager – a troubleshooter for companies – but putting together the Acorn deal has got him thinking about the longer term. He likes the idea of setting up a a company dealing with thin client technologies: probably ARM-based, but not necessarily using Acorn technology.

"Plus I want to finish my plane."

Jill Regan AU

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2Mb VRam	£ 89.00
8Mb SIMM	£ 14.00
16Mb SIMM	£ 24.00
32Mb SIMM	£ 45.00
64Mb SIMM	£ 109.00

PC Cards & Software

DX4-100 PC Card	£ 229.00
586-100 (Acorn) PC Card	£ 329.00
586-133 (CJE) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
Windows 98	£ 79.00
MicroSoft Small Business Ed.	£179.00

Monitors

Iiyama 15" 350	£ 175.00
Iiyama 17" 400 (S701GT)	£ 363.00
Iiyama 17" 400 Pro	£ 385.00
Iiyama 19" 450	£ 487.00
Iiyama 19" 450 Pro !NEW!	£ 527.00
Iiyama 21" 501 Pro	£ 821.00
Iiyama 21" 502 Pro	£868.00
CTX mons have (3 year on-site warranty)	
CTX 14" Digital Scan	£ 139.00
CTX 15" Digital Scan	£ 175.00
CTX 17" .28 70Khz Digital	£ 299.00
CTX 17" .26 92Khz Digital	£ 385.00
CTX 17" Futura .25 dot	£429.00
Acorn AKF60 14"	£264.00

Flatbed Colour Scanners



There are now a growing number of scanners which will work on RiscOS. The Plusteks work on the parallel port so no extra interface is required. All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI connecting cable. Studio24Pro instead of Imagemaster - just £30.00 extra!

Epson GT5500 SCSI	£259.00
Epson GT9500 par&SCSI	£519.00
Plustek OpticPro 9636 600dpi	£149.00
Epson Filmscan 200 (transpar)	£435.00
Canon Canoscan 2700F (trnsp)	£557.00

SCSI Cards & Cables

Cumana SCSI II Card	£175.00
EESOX SCSI II Card	£145.00
50 mini 'D' to 50 Centronics	£16.00
50 mini 'D' to 25 'D' plug	£16.00
25 'D' plug to 50 Centronics	£13.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
Parallel 4 way	£19.99
Serial 2 way	£19.99
25 'D' plug to 25 'D' plug	£4.99
25 'D' plug to 36 Centronics	£4.99
Monitor+Keyboard 2 way	£19.99
15way HD to 15way HD cable	£4.99
15 way HD fully screened	£16.99
Male-male mini DIN keybrd cab	£3.00
Mini DIN to 5 pin keybrd adptr	£1.50
5 pin DIN to 5 pin DIN keybrd	£2.50

Many other types also available please ask

Hard Drives



Pineapples removable drive system is available for IDE and SCSI systems.

IDE removable system	£19.00
SCSI removable system	£25.00
IDE or SCSI cable	£5.00

Bare IDE harddrives

1.7Gb IDE	£50.00
2.5Gb IDE	£99.00
4.3Gb IDE	£124.00
6.4Gb IDE	£159.00
9.1Gb IDE	£199.00

IDE Expansion

x4 IDE Expansion card	£69.00

Bare SCSI harddrives

1.0Gb SCSI	£99.00
4.2Gb SCSI	£219.00
6.4Gb SCSI	£299.00
9.1Gb SCSI	£575.00

ZIP parallel port drives

Iomega parallel port ZIP drive	£149.00
Iomega SCSI internal ZIP	£129.00
Iomega internal IDE ZIP (for use with IDE expansion card)	£75.00
100Mb ZIP cartridge	£9.99
Pack of 5 Zip Cartridges	£45.00

Studio24Pro



'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool' - *Acorn User Mar96*

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Users note FREE update v2.16 is now available.

PAL TV Coders



We now have two PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. Both models have S-VHS as well as standard video outputs. The VGA converter works in VGA and SVGA screen modes and is ideal for the RiscPC. Please ask for more info.

VGA Converter PAL Coder	£159.00
PLC/4 PAL Coder (mode 12,15) for A3020,A4000,A5000,RiscPC	£99.00

Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.



Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple Software can help you with ALL your Acorn computer related problems.

Colour Printers



Canon BJC80 - portable col	£233.00
Canon BJC250	£149.00
Canon BJC620 - colour	£229.00
Canon BJC4300	£198.00
Canon BJC4550 (A3)	£287.00
Canon BJC5500 (A2)	£649.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 440	£139.00
Epson Stylus Colour 640	£179.00
Epson Stylus Colour 850	£279.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 6L (laser mono)	£279.00

Other Items

Acorn !Browse (CD only)	£39.99
Acorn RiscCafe (JAVA)(CD)	£39.99
RiscOS 3.7 upgrade	£64.62
RiscOS3 PRM vols 1-4	£99.95
RiscOS3.6 PRM vol 5a	£29.75
Sibelius Junior v3.0	£55.00
Sibelius 6 software v3.5	£115.00
Sibelius 7 Student v3.5	£351.00
Sibelius 7 software v3.5	£699.00
Acorn Netstation (Ethernet)	£351.33
Acorn Netstation (Modem)	£351.33
A7000 upgrade to A7000+	£249.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

Pineapple Software

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